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1.0 INTRODUCTION

In 2006 the Board of County Commissioners, the City Commission and the Leon County Sheriff committed to resolving one of the long-standing public safety concerns of their community - the creation of a joint dispatch center. The three entities agreed that it was in the public's best interest to have one location that would receive and dispatch all calls for service for law enforcement, fire, and emergency medical services (EMS).

The entities contracted with Winbourne & Costas, Inc., of Washington, D.C., in December 2006 to assist them in planning the consolidation of emergency communications operations. The scope of this effort was to evaluate the City of Tallahassee Police Department and Leon County Sheriff's Public Safety Answering Point's (PSAP) responsibilities as they are conducted today and develop a plan to consolidate all operations into a new PSAP. The areas evaluated in this report include governance and organization, personnel, operations, technology, facilities, and budgetary requirements. Consideration of external influences included current and future criteria such as population growth, technology, personnel, cost and operational capabilities.

Currently in Leon County the dispatching of law enforcement and emergency personnel is operated by two separate entities: the Leon County Sheriff's Office and the City of Tallahassee Police Department. The Sheriff's Office dispatches the Sheriff's Deputies and Emergency Medical Services (EMS) personnel in the EMS division operated by Leon County. The City of Tallahassee Police Department dispatches police officers and fire services personnel of the Tallahassee Fire Department and local volunteer fire departments.

The Winbourne & Costas team conducted a baseline evaluation of both PSAPs, evaluated consolidation challenges, and has produced a consolidation plan with estimated costs. We focused our recommendations on consolidating PSAP operations to improve 9-1-1 and non-emergency service delivery that would entail minimal organizational change on the part of client agencies.

The criteria we used for our analysis are the same that any community would have for making similar recommendations including:

- Improve service to citizens
- Enhance control of operations (including homeland security considerations)
- Increase interoperability capabilities
- Identify risks
- Analysis costs
- Analyze findings from interviews
- Include best practices

The Public Safety Communications Board (PSCB) is making considerable headway in addressing the overarching issues that will contribute to providing higher levels of quality service to the citizens and visitors of the City of Tallahassee and Leon County. We understand that the goals of the PSCB are to reduce emergency services response times, and increase first responder safety and customer satisfaction.

Specific recommendations include:

- Governance and organizational structure that will establish an improved E-9-1-1 service delivery model.
- Operational changes that will produce reductions in 9-1-1 call answering and abandonment rates and improve customer service
- Operational and technical enhancements and adjustments to facilitate closest unit response for "emergency in progress" calls for service
- Steps that can be taken to reduce the amount of non public safety related calls that are received and processed by 9-1-1 PSAP resources
- Steps that can be taken prior to consolidation to improve E-9-1-1 service delivery and prepare the public safety providers and PSAPs for emergency communications consolidation

All members of the PSCB, Technical Subcommittee (TSC), and Public Safety agencies are to be commended for their commitment to enhancing the provision of public safety resources to the residents and visitors of Leon County and the City of Tallahassee. Their vision for joint dispatch consolidation is in alignment with the State of Florida 9-1-1 Plan which advocates:

> "As a goal for 9-1-1 system design, a primary 9-1-1 PSAP shall be located in a centralized, consolidated radio dispatch facility that serves all public safety agencies within the county or other specified geographical area"

1.1 Report Structure and Schedule

This is our final report provided to the Technical Subcommittee (TSC) as part of this project. Our ***first*** report documented our team's interviews with members of the PSCB, TSC, City, County, and Public Safety leadership and administrators. It documented their visions and the challenges they anticipate for the consolidation effort.

Our ***second*** report provided an analysis and key findings on current emergency communications center operations including:

- Governance and Organization
- Personnel practices
- Operations
- Technology
- Facilities
- Budget

This report consolidates the information contained in the first and second reports and also provides a consolidation plan, with options, and a recommended implementation plan with estimated costs.

This report was circulated for comment amongst TSC and PSCB members. Their feedback was considered and incorporated into the final report.

1.2 Methodology Overview

This section of the report provides an overview of the methodology employed by Winbourne & Costas to gather and analyze the information that led to our recommended plan to consolidate emergency communications operations.

The major activities that supported our review and analysis of the current state of emergency communication operations are as follows:

- Our team conducted individual and group interviews with City and County leadership to gather information on the issues and challenges affecting the consolidation of the dispatch centers. Our interviews in this phase targeted three groups – City, County, and Sheriff's Office leadership and support staff.
- Interviews with personnel in client agencies served by PSAPs, and centralized functions providing support to the PSAPs.
- Interviews with management, support staff, and line employees at each PSAP
- A meeting with representatives of the City of Tallahassee Police Department who are members of the Big Bend Police Benevolent Association
- Reviews of background documentation provided by the City and County to enhance our understanding of the mission, organization, and operation of the PSAPs
- Job observation visits to each PSAP to shadow staff engaged in call taking, dispatch and support operations, involving 12 PSAP employees over a period of 8 hours of observation
- Site inspections of each PSAP to document their facility configurations
- Meetings and individual interviews with members of the Technical Committee

We interviewed a total of 45 stakeholders and conducted many follow-up interviews across the above groups. All stakeholders interviewed and documents reviewed are listed in Appendix 8.1.8

2.0 EXECUTIVE SUMMARY

The demands on the nation's public safety agencies have never been higher. Whether they are preparing for or responding to accidents, natural disasters or criminal, even terrorist threats, there has been an increase in expectations from the public. These expectations include not only effective first responder performance but also that all relevant agencies have effective processes in place to support analysts, planners and management to ensure maximum effectiveness throughout the entire public safety environment.

The overall objectives of consolidating the City of Tallahassee and Leon County Sheriff's emergency communications operations are to;

1. Enable a single call taker to receive and process all types of 9-1-1 calls, regardless of the service requested

2. Eliminate the transfer of 9-1-1 calls between PSAPs

3. Consolidate law enforcement dispatch operations to enable closest unit response to "emergency in progress" calls for service

4. Optimize the utilization of EMS/Fire resources in the response of the closest/most appropriate unit(s) to calls for medical services, and

5. Facilitate coordinated responses to emergencies by all public safety agencies

Our team's recommendations for accomplishing the consolidation of emergency communications are as follows;

- Introduce a Governance and Oversight Structure for the Consolidation Project and the new Center (Chapter 5.1, A)
- Establish the Center as an independent agency (in a phased transition) reporting to and governed by the Public Safety Communications Board (Chapter 5.1, B)
- Utilize the Blueprint 2000 agency development model to establish the new Department of Public Safety Communications (DPSC) (Chapter 5.1)
- Execute a Florida Statute Chapter 163 Interlocal Agency Agreement to delineate financial support, obligations, organizational structure, levels of cooperation, and how disputes will be resolved that also specifies service level expectations and identifies accountabilities for costs, and scope of authority.
- Set the guiding vision for Center, ensuring representation of the client base it serves; clarify its mission and chart the strategic direction (Chapter 5.1, D)
- Transition emergency communications operations and processes to a targeted technology platform that facilitates the seamless integration and coordination of public safety communications (Chapter 5.4)
- Manage service to internal clients through the Chapter 163 Interlocal Agency Agreement, with respect to service level expectations, and implement processes to monitor, track and evaluate service performance relative to expectations (Chapter 5.3)
- Set the tone for effective leadership of the Center, emphasizing the following behaviors – leadership, professionalism, visibility, engagement, credibility and transparency, employee involvement, respect, caring and concern (Chapter 5.3)
- Improve citizen and client service by defining and implementing a program of standards and measures, and by strengthening accountability for performance (Chapter 5.3)
- Quantify, and thus improve the transparency of the total 'cost' of Center operations to effectively support informed investment decisions and sound fiscal management (Chapter 5.3)

Upon thorough review of existing operations, and taking into account the lead time required to construct the new emergency communications center and the necessity to begin the integration of personnel, operations, and technology to improve operations, as well as the public's best interests, our team recommends that the consolidation activities occur in the following sequence:

1. Establish the Center as an independent agency, assigning responsibility to the Agency Director for the transition of current personnel, operations, technology, administration, and budget elements to a unified environment leading to occupancy of the new PSAP,
2. Migrate users to the targeted technology solutions and operational processes prior to migration to the new PSAP insofar as possible,
3. Consolidate new call taking operations and all existing dispatching operations (Police, Sheriff, Fire, EMS) upon migration to the new PSAP, and
4. Consolidate law enforcement dispatching upon implementation and stabilization of call taking operations at the new PSAP.

The successful implementation of the recommendations outlined in this report rests on the City, County, and County Sheriff's commitment to the vision for the future of Public Safety Communications and to the planning and implementation of the changes necessary to establish and position the new organization and its workforce for success. The scale of the changes proposed in this report is significant as they span all aspects of the current organizations, their operations and workforce practices. To this end, our roadmap for implementation is based on a well-defined, comprehensive program of change that is must be led by an experienced "change" professional. The changes should be implemented with active involvement of the existing workforce and executed with care and concern for the well being of the organizations and the people that make them work.

2.1 Financial Needs for Consolidated Operations

Facility Costs

As required, our team conducted a space needs assessment for square footage for the Operations Floor, and Staff Offices only (Chapter 5.6). Therefore, our estimated facility costs are for those areas only, not the entire facility, and do not include other infrastructure requirements and costs, (Generators, Cabling, Network, Security, HVAC, etc., noted in Appendix 7.1) and staff support areas which must be determined through a programming effort by the Architectural-Engineering firm contracted to design the building. We estimate the Operations Floor and Staff Offices will require approximately 9,107 square feet of space, resulting in an estimated cost of between $5,464,200 and $7,285,600, as noted in the below table

.On-Going Costs:	
Item	**Estimated Costs**
Annual Personnel Costs:	$6,521,472
Consolidated PSAP Software and Related Costs	$347,216
Other Costs (Appendix 7.2)	$700,992
Facility Maintenance	To be determined based on sourcing and facility configuration
Subtotal:	$7,569,680
One-Time Costs:	
Items	**Estimated Costs**
Consolidated PSAP Hardware, Software, and Furnishings Costs	$4,364,731 to $5,190,731

Facility Operations Floor and Staff Offices	$5,464,200 to $7,285,600
Subtotal:	$9,828,931 to $12,476,331
Costs to be Determined:	
Facility and Infrastructure Cost Estimates	To be determined by the Architectural-Engineering firm contracted to design the building (Appendix 7.2)
Remaining Technology Costs (video, wireless network, etc.)	To be determined by Project Steering Committee

2.2 Major Recommendations Summary

The below summary of major recommendations contained in this report is provided to assist the PSCB in identifying and tracking the resolution of each major decision point.

Chapter	CONSOLIDATION PLAN MAJOR RECOMMENDATIONS SUMMARY
	RECOMMENDED SEQUENCE OF CONSOLIDATION ACTIVITIES
5.1, B	Establish the Center as an independent agency, assigning responsibility to the Agency Director for the transition of current personnel, operations, technology, administration, and budget elements to a unified environment leading to occupancy of the new PSAP
5.1	Develop and execute a Chapter 163 Interlocal Agency Agreement to establish the new organization and delineate the organizational structure, roles and authority, and how budget, benefit, and personnel services required of the new organization will be determined and funded
2.0	Migrate users to the targeted technology solutions and operational processes prior to migration to the new PSAP insofar as possible
2.0	Consolidate call taking operations upon migration to the new PSAP
2.0	Consolidate law enforcement dispatching upon implementation and stabilization of call taking operations at the new PSAP.
	GOVERNANCE AND ORGANIZATION
5.1, A	Introduce a Governance and Oversight Structure for the Consolidation Project
5.1, B	Establish a Department of Public Safety Communications (DPSC) as an Independent Agency (in a Phased Transition) Reporting Public Safety Communications Board
5.1, B	Utilize the Blueprint 2000 agency development model to establish the new DPSC agency.
5.1, A	Implement the recommended Project Organizational Structure
5.1, B	Hire a Civilian Director to Lead the Emergency Communications Center *(The position description has been established and is currently advertised in 9-1-1 and Emergency Management related publications and web-sites).*
5.1, C	Establish an Organizational Transformation Plan
5.1, D	Set the Guiding Vision for New Organization and Center, Ensuring Representation of the Broadened Client Base it Serves; Clarify its Mission and

	Chart the Strategic Direction
5.1, E	Establish the Committees Necessary to Develop the Organizational and Operational Structures, Processes and Plans for the New Center
5.1, A	Establish a Project Steering Committee
5.1, E-1	Establish an Information Technology Committee to begin planning for migration to the new Center
5.1, E-2	Establish an Operations Committee to take the leadership role in the migration of PSAP operations to the DPSC.
5.1, E-3	Establish a Personnel Committee for the purpose of determining the appropriate level of staffing and developing a personnel system combining the County and City systems to support the current and future staffing requirements.
5.1, E-4	Establish a Budget Committee (County, City, TPD, LCSO, Fire, EMS) led by the Director.
5.1, E-5	Establish a Universal Emergency Dispatch Committee, lead by the Director, and composed of members of the Operations, Personnel, and Technology Committees with input from ad-hoc members of other committees as necessary.
5.1, E-6	Acquire the supplemental resources (five term employees) necessary to support the recommended project Committees
5.1, E-3	Recommend the hire of a Deputy Director for Operations
5.1, E-3	Recommend the hire of a Budget Analyst
5.1, E-3	Establish appropriate Administrative Support positions, sourcing from current staff
	PERSONNEL AND STAFFING
5.2.1	Transfer all staff from the Tallahassee Police Department Communications Center to the new organization
5.2.1	Transfer all staff from the Leon County Sheriff's Office Communications Center to the new organization
5.2.1	Hire new staff in an on-going effort to fill current and future vacancies
5.2, Training	Clarify the level of training for each communications member to establish the best mix of call-takers and dispatchers to support the public safety communications goals and services.
5.2, Training	Determine the extent of National EMD Certification necessary throughout the newly consolidated organization.
5.2, Training	Develop an SOP to clearly identify the requirements for National EMD Certification within the new organization.
5.2, Staffing	Implement the 2007 recommended shift schedules, centered on 3 tours of duty; Shift 1: 11:00 p.m. to 7:00 a.m. Shift 2: 7:00 a.m. to 3:00 p.m. Shift 3: 3:00 p.m. to 11:00 p.m.
5.2, Staffing	Implement the recommended 2007 call taker staffing recommendations
5.2, Staffing	Initiate an aggressive recruitment program to hire 6 PSCOs for the TPD PSAP
	OPERATIONS
5.3.1	Improve Citizen and Client Service by Defining and Implementing a Program

	of Standards and Measures, and by Strengthening Accountability for Performance
5.3.1	Quantify, and thus Improve the Transparency of the Total 'Cost' of Center Operations to Effectively Support Informed Investment Decisions and Sound Fiscal Management
5.3.3	Consolidate 9-1-1 Call Processing
5.3.4	Reduce the Amount of Unnecessary Calls Received on the Non-Emergency Lines
5.3.5	Determine the Future of Law Enforcement Dispatch and Field Operations
5.3.6	Reconfigure Call Taker Workstations
5.3.7	Develop After Hour Warrant Verification Procedures
5.3.8	Minimize the Use of 10-Codes on the Radio
5.3.9	Consolidate Existing and Develop New Standard Operating Procedures
5.3.10	Develop Future Back-Up Capabilities
5.3.11	Develop the Migration/Cutover Plan
5.3.11	Meet State Technology Office (STO) Requirements
	INTEGRATION OF TECHNOLOGY
5.4.9	**E-911:**
	Remain on CML/Plant platform in new facility
	Recommend diverse routing of the 9-1-1 trunks and other phone lines such as analog phone sets at each call taking positions to provide diversity of telecommunications
	The phone lines should enter the building at diverse locations and have separate demarcation points
	At a minimum the second routing into the building should include all 9-1-1 trunks
	In regards to CTI we recommend that the existing system be transferred to the new facility
	We recommend that the telephone system design reflect the accurate number of required ring-down phones required for the new facility based on each agencies needs
	The system design must ensure the appropriate number of administrative lines are included
	In addition, for the MIS capabilities, we recommend that those MIS systems for CTI and the E-9-1-1 telephone system should be included in the new design.
	With respect to the Master Clock we recommend that a single system be procured and implemented at the new facility
5.4.1	**CAD:**
	Implement the Motorola platform in the LCSO PSAP
	Migrate LCSO PSAP to Motorola platform before occupying new facility to provide a “virtually” consolidated environment
	Configure LCSO and TPD PSAPs as live backups to each other
	Install and test new equipment in new facility 4 to 6 months prior to cut-over
	Implement a risk management program for the CAD/RMS consolidation program that has both a City and County and vendor risk manager assigned as

	leads; follow a documented process; and report to the PSCB on a continual basis
5.4.1	**Law Enforcement RMS:**
	Consolidate on Motorola law enforcement RMS and HTE field reporting
5.4.5	**CAD/RMS Installation in the New Facility:**
	The facility should have the capability of connecting to the external 10GB backbone via diverse connections and providing 100MB to the desktop
	Additional jacks should be available at each console for future growth and VoIP
5.4.1	**Wireless:**
	Short term - utilize the existing wireless network controllers providing intelligent roaming capabilities
	Mid-term – collect performance data on each network regarding coverage, reliability, effective throughput
	Long term – (upon of after occupancy of new facility) - merge onto a consolidated network for mobile support after analysis of performance data
5.4.1	**GIS:**
	After LCSO PSAP migration, identify one edit process for all interim mapping updates for public safety applications covering both City and County geography
5.4.9	**Telephony:**
	Transfer 9-1-1 Program Office responsibilities, staff, and technology to the new Agency after it has been established and stabilized
	FACILITY REQUIREMENTS
5.2	Recommend that the new Center have 15 call taker positions, 13 public safety dispatcher positions, 3 supervisor positions, and two teletype positions
5.5	Recommend there be redundant and diverse routing for power to the building
5.4.9	Recommend diverse routing of the 9-1-1 trunks and other phone lines such as analog phone sets at each call taking position to provide diversity of telecommunications. The phone lines should enter the building at diverse locations and have separate demarcation points.
5.5	Recommend at a minimum, an N+1 configuration
5.5	Recommend the design of the facility include the elements contained in the "Personnel Related Support Areas to Consider" table
5.5	Recommend adoption of supplemental "Facility Survivability Level" elements
5.5	Recommend adoption of Building "Footprint" elements
5.5	Recommend adoption of "Exterior Facility Areas" elements
	FINANCIAL NEEDS
5.6	Recommend that the City and County Commissioners consider funding the new agency and facility
	STEPS THAT CAN BE TAKEN BY THE PSCB PRIOR TO CONSOLIDATION
6.2	These recommendations are detailed in the matrix of Chapter 6.2 of the report

3.0 DISPATCH CONSOLIDATION VISION AND GOALS

The purpose of this chapter is to summarize the vision, goals and challenges to consolidation that were identified in interviews with City and County leadership by Winbourne & Costas. This information was utilized in the development of recommendations for subsequent chapters of this report.

Our team conducted individual and group interviews to gather information on the issues and challenges affecting the consolidation of the dispatch centers. Our interviews in this phase targeted three groups – City, County, and Sheriff's Office leadership and support staff. We conducted a total of 23 interviews across the groups during this phase of the project, as shown below:

County Leadership and Support Staff

- C.E. Ed DePuy, Jr., Chair, County Commission
- Parwez Alam, Leon County Administrator
- Alan Rosenzweig, Assistant County Administrator, Leon County
- Tom Quillin, Chief, Leon County Emergency Medical Services
- Pat Curtis, MIS Director, Leon County
- Mac Kemp, Deputy Chief, Operations, Leon County Emergency Medical Services
- Chad Abrams, Deputy Chief, Administration, Leon County Emergency Medical Services
- Daniel Spillman, Captain, Special Operations, Leon County Emergency Medical Services

City Leadership and Support Staff

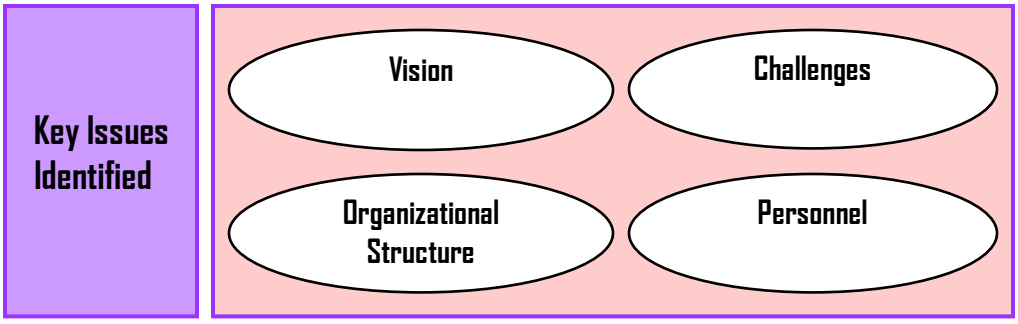
- Debbie Lightsey, Commissioner, City of Tallahassee
- Anita Favors Thompson, City Manager, City of Tallahassee
- Walter McNeil, Former Chief, City of Tallahassee Police Department
- Cindy Dick, Chief, City of Tallahassee Fire Department
- Levin Magruder,800 MHz System Manager, Radio Communications Division, City of Tallahassee
- Don DeLoach, Chief Information Systems Officer, Information Services Systems, City of Tallahassee
- John A. Proctor, Interim Chief, City of Tallahassee Police Department
- Jeanine C. Gauding, Director, Technical Services, City of Tallahassee Police Department
- Dianne Anderson, Captain, Technical Services, City of Tallahassee Police Department
- Tom Maureau, Lieutenant, Police Information Management Services, City of Tallahassee Police Department

Leon County Sheriff's Office Leadership and Support Staff

- Larry Campbell, Sheriff, Leon County
- Scott Bakotic, Major, Leon County Sheriff's Office
- Michael Wood, Major, Law Enforcement Operations, Leon County
- Richard Smith, Director, Division of Emergency Management Sheriff's Office
- Billy Fair, Lieutenant, Leon County Sheriff's Office
- Gene Griffin, Information Technology Section Manager, Leon County Sheriff's Office
- Rebecca Gay, Communications Manager
- Edith Taylor, 9-1-1 Systems Manager, Division of Emergency Management

3.1 Interview Findings

Several key issues consistently arose during the course of our interviews. These issues primarily centered on the following:



The following information was distilled from our interviews and represents the most salient points each interviewee expressed.

A member of the City leadership recommended that dispatch operations should be led by an independent agency and that the structure should be put in place quickly. Their view was that an Emergency Operations Center (EOC) should not get "rolled" into the new Center. Another City leader shared that though a delicate issue, consolidation is necessary to provide optimum public safety resource response. This official believes that the Center should be a separate organization with a civilian director that reports to the City Manager and the County Administrator, with PSCB oversight. Another City leader explained that with an independent Director responsible for the provision of all call taking and dispatch resources each public safety agency could expect an equal amount of attention and resources.

A member of the County leadership presented a possible scenario where current Public Safety Answering Point (PSAP) resources are first co-located, and then move towards consolidation. Under the consolidation scenario, current employees would become employees of the new agency. This leadership stakeholder said they are not ruling anything out and want to address the consolidation in every possible way. However, this leader did state that no employee should lose their job as a result of consolidation. They were also interested in developing a consolidated Emergency Operations Center (EOC) and call center facility. It was suggested that the City of Tallahassee and Leon County Blueprint 2000 agency structure be considered when developing a governance model for the consolidation. Blueprint 2000 utilizes an effective governance structure to recommend, approve, develop, and plan infrastructure improvements to stimulate economic development in targeted areas of the community.

One member of the County leadership offered that consolidated operations must include technical expertise from each of the four public safety organizations to better enhance dispatch operations and decisions. Another stated that the personnel systems should be consolidated to improve employee retention, close any compensation gap, and provide greater opportunity for career growth. This staff member stated that one objective should be to eliminate judgments about who pays for what by automating the cost allocation process.

Leon County EMS officials described several jurisdictional issues that result in conflict and negatively affect customer service. It was stated that the when emergency medical calls arrive at the TPD PSAP, the TFD sometimes dispatches units before the call is transferred and received at

EMS. This results in the Fire Department responding to calls that are EMS domain before emergency medical protocol decisions are made by EMS. According to EMS staff, the TPD rotates their staff through call taking and dispatching responsibilities but the employees are not fully trained on Emergency Medical Dispatch (EMD) protocols. Furthermore, EMS utilizes industry standard ProQA dispatch software to assist their dispatchers in quickly determining the appropriate medical response determinant code for each emergency medical call. The software then guides dispatchers in providing all relevant Pre-Arrival and Post-Dispatch instructions, as well as important case completion information. TPD dispatchers are not trained in and do not have ProQA available to them. EMS staff offered that consolidation will result in standardized training, improved personnel evaluation processes, and standardized performance certification levels

Another issue brought forth is that because EMS and the Fire Department utilize different Automatic Vehicle Location (AVL) and Computer Aided Dispatch (CAD) systems, the Fire Department is unaware if there is an ambulance closer to a call for service when they dispatch their units, which causes an inefficient use of resources. Furthermore, because the two PSAP systems are not synchronized, there are difficulties in reconciling data that is need for management reports such as response and notification times. The information reported by the two PSAPs is not considered to be accurate or consistent.

Some EMS officials expressed the need for a stronger functional relationship with the Fire Department which causes lost opportunities for efficient resource deployment and patient care. Top EMS officials stated that only a total restructure of the dispatch system towards an independent agency will deliver a system that provides a properly trained person who can provide the necessary service based on closest available resource.

City Fire Department leadership believes that dispatch consolidation can work, it is the best thing for citizens, and can be provided at reasonable cost. Consolidation will eliminate redundancies that arise when citizens have to speak to two call takers because their calls get transferred and when multiple agencies unnecessarily dispatch units to the same call for service. The Fire Department would like to see a CAD that is configured to recommend a response compliment that includes and recommends the appropriate agency(s) for each call as appropriate. Fire Department leadership would also like to maintain a uniformed fire officer presence at the new call center to support dispatchers with the deployment of resources and operational protocols. The Department currently utilizes a funding model at Fire Station 15 where the Department charges the City and County for services rendered based on the percentage of dispatched calls for service and the total cost of apparatus responding to each call for service. The program includes the production of detailed reports which list all call for service details on which the cost allocation is based, which may be applicable to this project.

City Police Department leadership stated that there is a need for consolidation and that the community would be very well served by improvements in dispatch operations. To be effective, call center leadership should report to the County Administrator and the City Manager. It was stressed that any consolidation of dispatch services should be well thought out and methodically developed so that it can be done right the first time. The TPD has invested heavily in its PSAP technology and wants to maintain the integrity of its systems and quality of service in any

consolidation scenario. One staff member stated that TPD has the capacity to merge LCSO PSAP operations into their current PSAP and that they have developed a high level plan for just such a scenario.

Several staff commented that closest unit response by the unit(s) with appropriate resources, regardless of agency, should be the dispatch model. However, the politics of jurisdictional boundaries and responsibilities will need to be addressed. For example, one staff member commented that some 9-1-1 calls which originate in the City are being routed to the LCSO PSAP and dispatched to Sheriff Deputies before the call is transferred to the TPD PSAP. The Leon County Sheriff's Office oversees Emergency Management activities for Leon County, including operation of the county wide enhanced 9-1-1 System. Therefore, the Leon County Emergency Manager is responsible for the proper routing of all emergency calls. The staff member explained that the routing of all calls to a central dispatch center would resolve such conflicts.

Another staff member stated that Sheriff Deputies are responding to calls for service within the City without notifying the TPD PSAP in situations where they may not or do not have the responsibility for investigating the incident. Sometimes, it was stated, a Deputy may remain on the scene until TPD arrives or leave the scene before TPD arrives. The TPD has specific police beats only within each of the three police districts within the City. According to police staff however, the Sheriff has "beats" within the City which sometimes leads to an uncoordinated and duplicative law enforcement response.

The Leon County Sheriff leadership is an advocate of dispatch consolidation and offered that the project needs "buy in" from the people who do the work and that an effective communication plan should be developed to keep everyone informed. It was stated that the Director position is critical to the proper functioning of a consolidated dispatch Center and that conflicts regarding Fire and EMS dispatch protocols must be resolved. Currently, there is a dual response to each emergency medical call; a deputy is also dispatched to all emergency medical calls within the County. Sheriff Deputies routinely monitor TPD radio channels and respond to priority calls for service within the City. One staff member reported that some TPD officers are reluctant to respond to events across their jurisdictional boundary, even if they see another first responder on the scene, which presents safety, perception, and liability issues. It is understood that there will be a learning curve for City dispatchers as they learn the County geography. However, some of the biggest challenges to dispatch consolidation were identified as the differing law enforcement agency policies and philosophies regarding issues such as police/sheriff authority, back-up, pursuit, and arrest policies.

3.2 Summary

As can be seen from the information presented, many stakeholders understood the potential benefits and support the concept of consolidating the City and County dispatch operations. Beyond that agreement however, are a number of ideas about what consolidation means and how it should occur.

Some of the challenges that arose regard differences in operational policies and protocols that can only be resolved through negotiation between the affected agency leadership. Other

recurring concerns revolved around the organizational structure of joint dispatch operations and its placement in the government structure.

The perspectives shared during our interviews were a valuable source of information and established the foundation for the subsequent chapters of this report.

4.0 ASSESSSEMENT OF CURRENT DISPATCH OPERATIONS AND KEY FINDINGS

4.1 Governance and Organization

Only an emergency communications organization which is agency-independent and focused solely on emergency communications operations will be able to provide the highest levels of consistent, client-centric, customer service, including reduced response times to emergency calls for service. Based on our experience, research, and understanding of the current operational and jurisdictional concerns, Winbourne & Costas recommends that a single organization that is independent of public safety providers (police, fire, sheriff, EMS, etc.) with its own budget and work force and reporting lines can provide the best service to public safety agencies and the public at large. Additionally, based on our analysis of the current 9-1-1 system and its relationship to the County and City Emergency Management structure, Winbourne & Costas also recommends that the Office of Emergency Management, with the Emergency Manager, the 9-1-1 Program System Manager and their respective staffs, participate in the planning process with the future emergency communications Director.

As the consolidation of emergency communications operations moves forward, some of the key organizational elements to be addressed include:

Administrative Functions

This element covers a very broad spectrum of requirements to effectively manage and maintain the new organization. Significant portions include: budget, contract management, purchasing, salary, benefits, technology support, records management, facility management, network and administrative telephone system support, and public information.

The alignment and assignment of budgetary control to the new organization gives this newly formed group control over the various support sections necessary to function as an effective government organization. The budget is for the administrative support of the new organization and not to maintain 9-1-1 related equipment, technology or services currently controlled by Florida Statute through the wire line and wireless 9-1-1 surcharge. Allocating tax dollars and other government derived revenues to support this organization will be a critical goal of the County and City leadership to successfully solidify the organization's support structure. Budget control also provides the new organization the ability to establish contracts and purchases for support of the facility and operations. The accounting of funds distribution and utilization will be better controlled through a separate budget instrument managed by the new organization.

Personnel assigned to the new organization will benefit with a uniform salary base and salary program suitable to sustain the required staffing of the operations as well as improving retention. The apportionment of the budget to support the salary alignments can be distributed to acknowledge longevity, certifications, increased responsibility (supervision), and promotion. In parallel with a managed salary plan, the streamlining of benefit packages for the employees will bring significant cost improvement to the organization, and grant the employees a more uniform and standardized benefits program for their care and well-being. The control of the human resource element of the budget gives the organization's leadership control of the recruitment, retention, and training of the operations and support staffs.

Other programs improved and managed through a single budget instrument will be:

- Records Management – a program required for the support of quality assurance, investigative services, and litigation support.
- Facility Management – a critical element enhanced through a single control of contracts to maintain physical plant operations – air handling, electrical, lighting, plumbing, etc., to support the operations of the 9-1-1 center.

Operational Improvements

Both the LCSO and TPD 9-1-1 Operations have unique requirements and have developed special processes and procedures to meet the needs of their customers – public safety organizations and the public. To achieve the greatest success in consolidation, both existing organizations will need to assess current requirements and develop a combination of processes and procedures with the stated goal of improving services. This will not be a difficult task provided control of the procedural streamlining is done in advance of the consolidation action of the two organizations.

Standard Operating Procedures (SOP) will be the first necessary step to pave the way to consolidation. Each organization has developed SOPs combining federal, state, county, and city laws and regulations to establish the proper procedure for handling the situations unique to each organization. Combining the separate SOPs will provide the dispatchers a clear procedure to follow. Where combining the SOPs is not practical due to unique legal requirements, a Section of the Chapter 163 Interlocal Agency Agreement should be established to provide the correct interpretation and guidance for the procedural development.

Supervision and staff work scheduling will be another area to improve operational services. Supervision of the staff under one span of control, greatly reduces misinterpretation of the supervisors and operations staff of procedures and performance standards. The new organization will provide a single management team from the Director down to the line supervisor, improving the management of the assigned personnel. The organization's management can better schedule and utilize the assigned personnel to meet the staffing requirements of the operations center as well as the flexibility to schedule training opportunities and events.

Improving the work schedule of a 24 hour operation is always a challenge to any leadership team. The uniqueness of the 9-1-1 operations, adds greater impact to the success of meeting the needs of the other public safety organizations and the public. At present, the LCSO 9-1-1 operations are maintained using a 12 hour shift schedule. The TPD 9-1-1 operations are staffed around an 8 hour shift schedule. Combining the two will require management to assess staffing

levels to support the consolidation and the availability of personnel to meet the assessed requirements.

The convergence of emergency operations and emergency communications Centers into a single facility is reflective of a growing trend and is becoming a standard for public safety providers throughout the United States such as Austin Texas, Fairfax Virginia and Washington, D.C.

Training

The training program can be one of the most important elements of a public safety communications organization. An effective and dynamic training program will not only train the dispatchers to a specific level of expected performance, but be capable of reacting to changes to laws or requirements to effectively and adequately modify the performance levels of the assigned personnel. Likewise, an effective training program will document the levels of training, manage certifications, and be available to assist supervisors and management in the identification of areas of improvement through quality assurance assessments and performance measurements established by the new organization.

At present, the LCSO and TPD 9-1-1 training programs adequately prepare and maintain the current dispatcher performance standards and expectations. Each program is structured to maintain the dispatch operations service levels for their respective assigned public safety organizations.

LCSO 9-1-1 operations support the Leon County Sheriff and Emergency Medical dispatch. The dispatchers are required to complete the National EMD certification program for continued employment.

TPD 9-1-1 operations support the City of Tallahassee Police and Leon County Fire dispatch. No national level certification program is required by TPD dispatchers.
Both existing organizations have strong and capable training programs with effective managers of each to meet the requirements for dispatch training. Consolidating both programs will not be difficult. However, the EMD certification requirement will need to be addressed to County and City leadership to determine the extent of the National Certification throughout the newly consolidated organization. A Standard Operating Procedure will need to be established to clearly identify the requirements for the National EMD Certification within the new organization.

4.2 Operations

Because the dispatch of County and City public safety service providers are divided between two PSAPs, many calls are transferred between the PSAPs.

In 2005, the TPD transferred 12,033 EMS calls to the LCSO PSAP.
In 2006, the TPD transferred 12,579 EMS calls to the LCSO PSAP.

In 2005, the LCSO transferred 1,149 Fire calls to the TPD PSAP
In 2006, the LCSO transferred 1,412 Fire calls to the TPD PSAP.

In 2006, the TPD transferred 2,620 LCSOSEC calls to the LCSO PSAP. These are calls were a caller specifically asks for other County services or it turns out to be a County call.

The two-tier call processing system for EMS calls received at the TPD PSAP and for Fire Department calls received at the LCSO PSAP is an ineffective service delivery approach. Every call for emergency medical or fire services that is transferred results in additional wait time for the customer with an emergency. Additionally, it is possible for calls to be dropped during the transfer process.

Call taker staffing is not adjusted to meet workload demands. This results in increased 9-1-1 wait times and abandoned call rates (Chapter 4.3).

Call takers who are actively handling 9-1-1 calls are distracted by an audible alert that continues to sound at their workstation if other 9-1-1 calls are in queue. Because the 9-1-1 and non-emergency lines are not integrated call takers must use two fixed telephone handsets. This not only presents operational challenges as call takers must alternate between answering two different handsets, but it also introduces ergonomic and health risks.

A means to conduct after hours warrant verification at the LCSO PSAP/Headquarters will need to be developed that is independent of call center staff (Chapter 5.3, 7).

Effective cooperation leading to centralized dispatch and response of the nearest available law enforcement unit(s) is constrained by several operational factors. These factors are characterized by specific operational scenarios that are referenced in Chapter 5 of this report. Additionally, the use of different 10 codes and a multitude of other radio codes can inhibit effective communication between public safety agencies. Complete consolidation of law enforcement radio dispatching will need to consider a restructuring of the geographical areas assigned to dispatch groups (Chapter 5.3, 5).

Under the current 9-1-1 system configuration, there are concerns that not all 9-1-1 calls are being routed to the proper PSAP. These concerns will be alleviated by routing all 9-1-1 calls to a central PSAP.

4.3 Service Level Documentation and Associated Metrics

Effective call centers have established service level objectives (SLOs). Service level ties the resources you need to the results you want to achieve. It measures the degree to which calls are being received at the PSAP and answered by a call taker and processed for dispatch. The goal is to have the correct number of properly trained call takers working at the right time to achieve your service level objective.

There are universally accepted quantitative measurements used by call center managers to meet workload demands and service level objectives. These measurements are primarily derived from the Automated Call Distributor (ACD) (which the current PSAPs do not have), the CAD system, and the 9-1-1 system.

Terminology

- A customer is in a "queue" when they are waiting for the next available call taker to answer their call
- An "abandoned" occurs when a customer hangs up the phone before their call is answered
- From the time a call is "received" at the PSAP until the time a call is answered by a call taker is the Average Speed of Answer "ASA"
- Service level is defined as "X percent of calls answered in Y seconds"
- A call is considered "dropped" when it is physically disconnected during the routing process before it is answered by a call taker

Service Level Standards

Although there is no universal service level standard for 9-1-1 call centers, the Florida State Technology Office (STO), Florida E-9-1-1 Plan, Technical Standard Number 4 of Section 3.4.1.1, requires that 90 percent of all voice calls during the average busy hour be answered within 10 seconds of arrival at the PSAP (http://fcn.state.fl.us/dms/e9-1-1/docs/e9-1-1plan/chapters1-8.doc).

The National Emergency Number Association (NENA) Call Taking Operational Standard/Model Recommendation, NENA 56-005, effective June 10, 2006, for answering 9-1-1 Calls is also that Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour (the hour each day with the greatest call volume, as defined in the NENA Master Glossary 00-001). (http://www.nena9-1-1.org/media/files/NENAopsSOPcallansweringstandardfinal061006.pdf).

Neither PSAP applies any formal performance standards although both Directors stated that their goal is to answer all 9-1-1 calls "as fast as possible", and before they default to the other PSAP (within 15 seconds). There are not any standards for abandon calls. Clearly, the goal is to reduce abandoned calls to a minimum. All supporting documentation utilized for this section is contained in Appendix 8.1.9 of this report.

Initial information provided by the 9-1-1 Program Office indicated a large increase in 9-1-1 calls answered in 2005 and 2006 by the LCSO. Further inquiry determined that the some of increase was attributable to the new 9-1-1 system's configuration and inaccurate reporting, as follows.

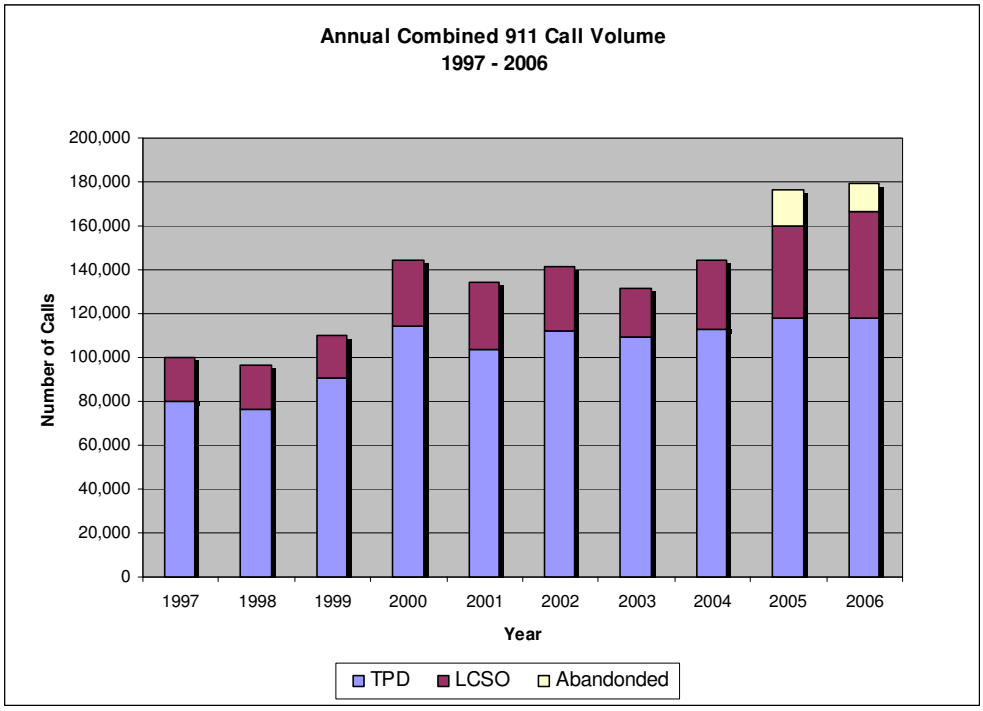
In July of 2005, a point-to-point T-1 was installed to support transfers, rollovers and the planned expansion for the County to do its own selective routing. It was recently determined that when transfers started using this circuit, a transferred call would be counted at both locations. Consequently, previous 9-1-1 statistical reports indicated an exaggerated call count for the LCSO in 2005 and the TPD in 2006. However, the minus 4,000 combined call count for 2006 represents only .48% of the total calls (9-1-1 and Non-emergency) received at both PSAPs and therefore, does not affect our subsequent staffing recommendations.

LCSO 9-1-1 Call Summary	
2005	***ANSWERED***
Original	55,581
Amended	41,997
2006	***ANSWERED***
Original	54,079
Amended	48,286

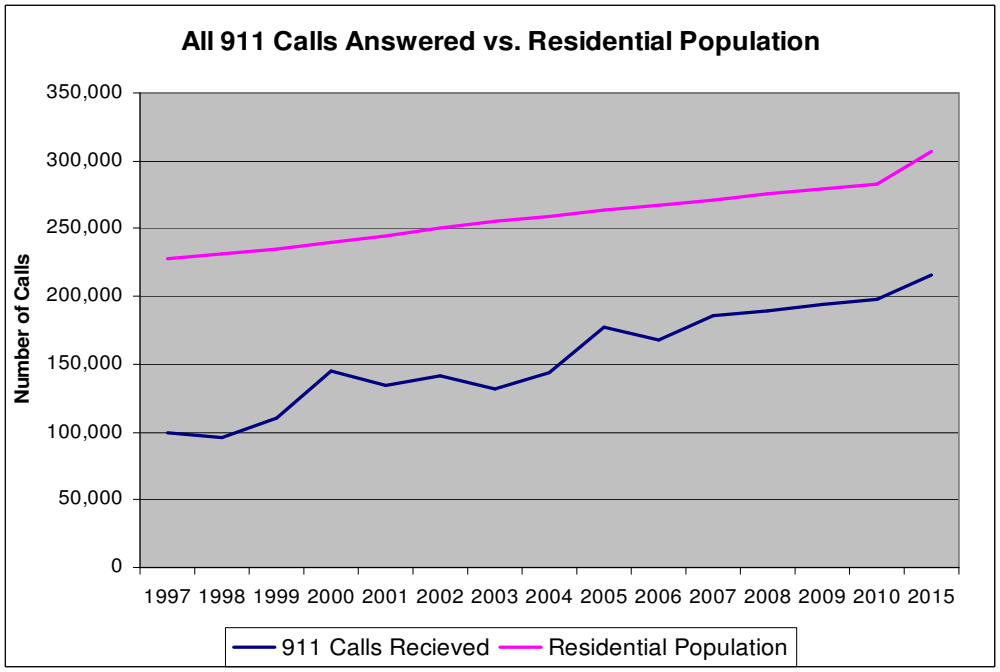
TPD 9-1-1 Call Summary	
2005	***ANSWERED***
Original	122,245
Amended	117,688
2006	***ANSWERED***
Original	116,056
Amended	118,194

The 9-1-1 statistical charts in this report have been adjusted so reflect this new information. The below chart illustrates the combined TPD and LCSO 9-1-1 call volume annually by year for answered calls. Data concerning abandoned calls is not available because prior to 2005, the previous 9-1-1 switch did not capture statistics on abandoned calls. As the objective of a 9-1-1 PSAP is to answer all 9-1-1 calls, the total number of abandoned calls are depicted in 2005 and 2006 to illustrate the true combined annual 9-1-1 call volume for those years. The total number of 9-1-1 calls received is analyzed with other factors to determine appropriate call taker staffing. In 2005 8.6% of all calls were abandoned by the caller. In 2006 7.2% of all calls were abandoned by the caller.[1] Our analysis was unable to determine how many of the abandoned calls may have been dropped by the system prior to being answered. Although there are no standards for abandoned call rates, based on our experience, the 7.2% rate in 2006 is within the average range of many PSAPs. The average annual increase in all 9-1-1 calls answered between 1997 and 2006 was **6%**. *Our first report incorrectly stated this as annual increase as 11%.*

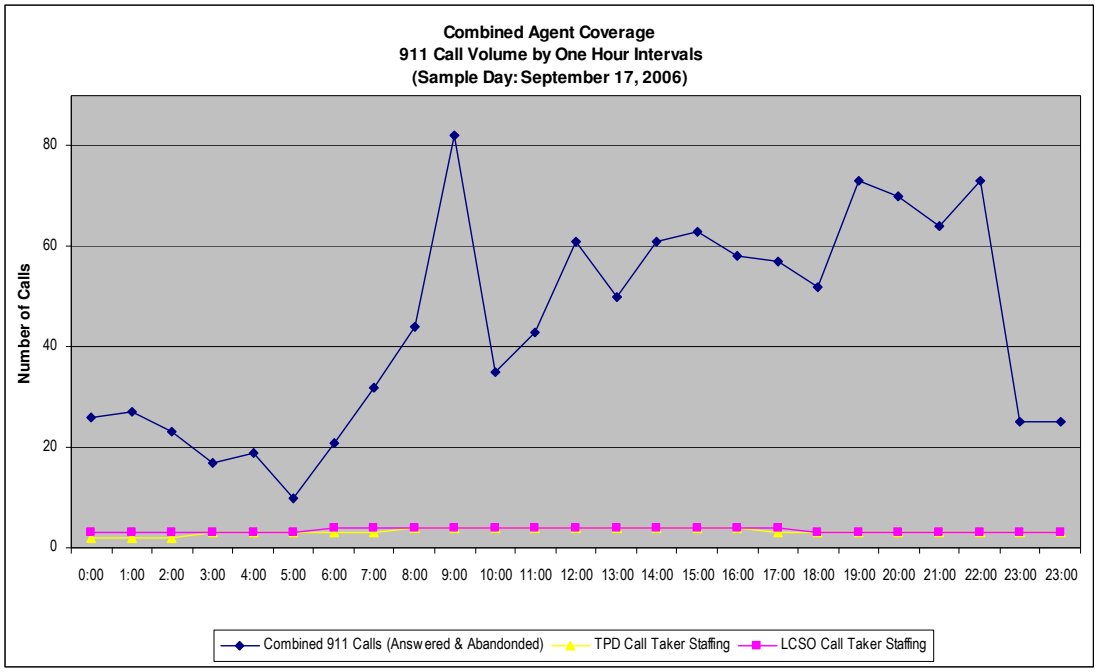
[1] Combined received 9-1-1 calls in 2005: 194,626, combined abandoned calls: 16,810 - 16,810 is 8.6% of 194,626 calls. Combined received 9-1-1 in 2006: 181,289, combined abandoned calls: 13,143 - 13,143 is 7.2% of 181,289 calls



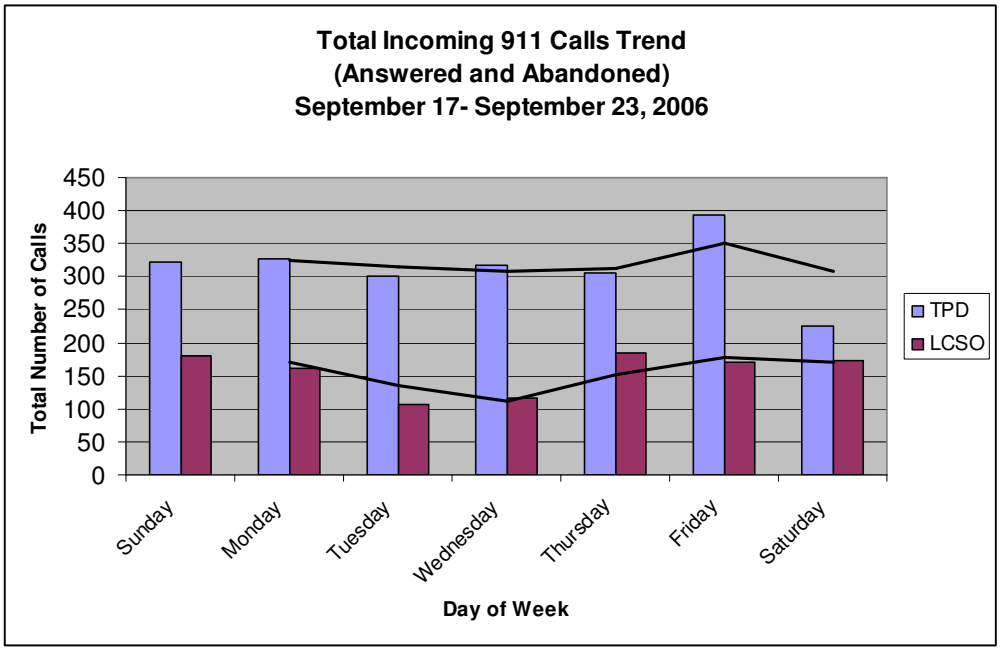
The below graph illustrates by year the trend between 9-1-1 calls answered and the residential population growth of Leon County. The 9-1-1 call volume beyond 2006 was extrapolated based on the average annual percentage increase of 9-1-1 calls answered between 1997 and 2006. The population trend is based on the average annual expected population growth from 2006 to 2015 as illustrated in the Tallahassee-Leon County Planning Department 2006 Statistical Digest.



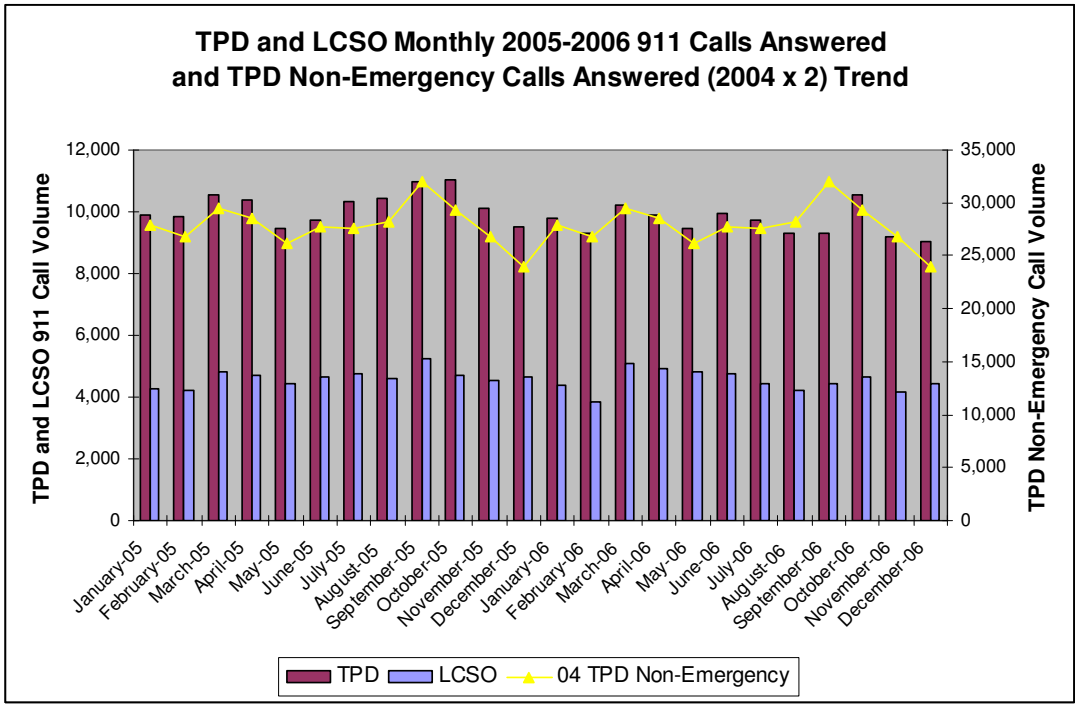
The below graph depicts actual PSAP staffing versus 9-1-1 call volume on a sample day, September 17, 2006, and illustrates how call taker scheduling does not take into account workload demands.



The below graph, utilizing a trend line, illustrates how the PSAPs experienced similar 9-1-1 call volume trends during a sample week.



It is important to understand what correlation, if any, there is between 9-1-1 and non-emergency call volume as well as temporal trends in order to build call processing, staffing, and other recommendations. Transposing the 2004 Non-emergency monthly TPD call volume over the 2005 and 2006 combined 9-1-1 volumes (answered calls only) presents an accurate representation and illustrates a close relationship between 9-1-1 and non-emergency call volume in the below chart.



In examining the 'business' of the PSAPs, our team concluded that core emergency communications is diluted by a sizeable non-emergency workload due to the demands placed by the "switchboard" nature of the non-emergency telephone numbers. Different call receipt and processing options should be considered.

In order to facilitate staffing assumptions it is necessary to approximate the number of annual calls answered on the LCSO non-emergency line. Accordingly, the number of calls answered during a sample week (6381) was multiplied by 52 (number of weeks in a year) to arrive at an annual volume of 331,812. For planning purposes, this number will be applied to the LCSO 2006 9-1-1 call volume (answered only) as an assumption to determine the percentage of 9-1-1 versus non-emergency calls answered by the LCSO PSAP. Accordingly, in 2006, 9-1-1 calls (53,429) represented only **14%** of the total calls (385,241) answered at the LCSO PSAP.

The only available data representing a full calendar year of calls answered on the TPD non-emergency line is for 2004, which logged a total of 334,288 calls. There were 113,073 9-1-1 calls answered by the TPD PSAP in 2004 (only 1,844 less than 2006) which means that 9-1-1 calls represented 25% of all calls answered (113,073 is 25% of 447,361) in 2004. In the one week sampling in January, 9-1-1 calls represented 30.56% of all calls received at the TPD PSAP.

For planning purposes though, we will utilize the more accurate overall average, which means that that answered 9-1-1 calls represent **25%** of all calls answered by the TPD PSAP.

In summation,

- The combined annual 9-1-1 and non-emergency line call volume is approximately **832,602**
- 9-1-1 calls represent only **20**% of all calls received at both PSAPs
- 9-1-1 call volume increased approximately **70%** in the 9 years from 1997 to 2006
- The residential population increased approximately **2.6%** between 2000 and 2006
- The residential population is anticipated to increase less than **1.5%** each year form 2006 to 2015 [2]
- Of the approximately 832,602 calls received annually (all 9-1-1 and Non-emergency calls combined), the TPD PSAP receives **54%** and the LCSO PSAP receives **46%**

In view of the close relationship between residential population growth and 9-1-1 calls (as illustrated in the "Calls Answered vs, Residential Population" chart), and taking into account the smaller projected increases in population growth, it could be assumed that average annual 9-1-1 call volume would increase approximately 1.5% per year through 2015. However, taking into account the serviced[3] population based on, 1) new commercial construction, 2) upward annual visitor trend between 1997 and 2005, and 3) the upward trend in enrollment at area institutions of higher learning, a call volume increase of **60%** over the next nine years from 2007-2015 will be applied to 9-1-1 call volume to determine staffing needs[4].

Historical statistics are not available for calls received on the non-emergency phone lines. Therefore, the possible annual increase in non-emergency calls is unknown. As the ultimate goal should be to decrease the number of non-public safety related calls received at the emergency communications centers, Chapter 5 of this report presents recommendations for reducing the volume of non-public safety related calls received at the PSAPs.

Neither Center utilizes a queue board nor similar device to monitor call taker and incoming call activity or has concrete Service Level Objectives for the speed to answer 9-1-1 or non-emergency calls. There is no real time monitoring of data by supervisors (e.g., calls in process, call taker 'not ready' status, etc.). The monitoring of 9-1-1 call activity and available resources is based on supervisor observation of call taker activities and the audible alert tone that sounds at all call taker workstations when 9-1-1 calls arrive.

[2] Tallahassee-Leon County Planning Department 2006 Statistical Digest, average annual population growth based on difference between estimated 2003 and projected 2015 populations,

[3] Serviced: Takes into account population increases associated with the routine influx of visitors and business commuters

[4] (60% of 181,149 [total combined answered and abandoned calls in 2006] divided by 9 years could result in a 12,076 average annual increase in 9-1-1 calls)

4.4 Personnel Practices

As separate organizations, the LCSO and TPD Communications Centers effectively support the current 9-1-1 Public Safety communications services meeting the personnel, training and certifications requirements for their respective areas of responsibility. Combining both organizations into a newly created organization in one facility is a solution that will promote great efficiencies of 9-1-1 Public Safety communications operations and services.

Consolidation will reduce hiring advertising costs since both organizations basically do the same recruitment advertising in the same publications. Consolidation will streamline personnel hiring processes, improving personnel evaluation processes, eliminating unnecessary personnel evaluation services, and improving the standardization of personnel services to the employee.

Salary and benefits for the call takers and dispatchers can be standardized and improved – gaining greater retention support and improving the recruitment process for new dispatchers. The Chapter 163 Interlocal Agreement should contain a section that establishes the new organization and delineates how budget, benefit, and personnel services required of the new organization will be determined and funded.

Staffing levels and work schedules can be standardized with an emphasis on work shifts that will improve dispatcher attention and performance. The personnel who provide the recording and logging call analysis processes will gain efficiency through a standardized and streamlined support of the dispatch operations and investigative services call analysis requirements. A Standard Operating Procedure will need to be developed between the new organization and the City and County services to design an efficient call analysis and extraction service.

Supervision of dispatch personnel will be improved with a more direct supervisory role within the single organization with a single set of personnel rules of performance standards and requirements. Certification programs can be enhanced and developed for the dispatchers to promote improvements in dispatch operations, meet accreditation standards, and meet the required certification levels for Emergency Medical Dispatch.

Emergency management services support and rapid response dispatch capabilities can be improved with a consolidated communications center. Special operations dispatch and communications services can also be enhanced through the consolidation of services with improved coordination among dispatchers.

4.5 Technology

Public Safety Systems Key Findings

Members of our team identified and evaluated the core PSAP related public safety systems and technologies currently in use within the jurisdictions of the City of Tallahassee and Leon County, Florida, including Computer-Aided Dispatch (CAD), and Records Management Systems (RMS). Documenting these systems and their interfaces will provide the City and County with the following significant benefits:

- Provide a baseline architecture against which a migration plan to a target architecture may be plotted.

- More effectively plan for the implementation of a new integrated and/or consolidated CAD/RMS environment.

- Identify issues and decision points which need to be addressed to effectively define the target architecture.

The County and the City have identified public safety as one of their core priorities. Further, as the largest jurisdictions in the region as well as housing the state capital, there are a number of public safety capabilities that these agencies must possess. The target environment must reflect those realities and provide the foundation upon which a tightly integrated suite of public safety applications may be delivered. The complete "Environmental Scan" of existing systems is contained in Appendix 8.1.5 of this report.

E9-1-1
Both PSAP E9-1-1 environments utilize substantially similar components including telephony interface, ANI/ALI database, recording and GIS/mapping to support call taking operations.

CAD and RMS
Three separate CAD and RMS platforms are in operation with no automated data exchange or interoperability present. LCSO is a unique, custom solution, EMS utilizes a COTS EMS-only product, and the City operates an all-encompassing COTS product.

The only CAD in place that could handle all agencies is the one operated by the City. Scripts or interfaces would need to be developed to ensure that key LCSO and EMS interfaces to ancillary systems that need to be maintained, e.g., document imaging and ProQA, would continue to be supported. The consolidated CAD platform must meet current LCSO performance metrics.

LAN/MAN
Both the City and the County operate high bandwidth networks. The City recently launched a network enhancement project. Three fire stations outside the City limits connect to the City network via T1 lines. One network environment in the building would support all users. An integrated public safety virtual network crossing both City and County networks connecting all remote locations would deliver additional benefits.

Wireless (Data)
Different technologies and frequencies are currently used by the various agencies for their wireless data needs. Commercial "air cards" are being examined by all agencies as well.

An intelligent roaming capability could provide a unified wireless environment utilizing the differing technologies that exist. This would be significantly enhanced if all agencies selected the same commercial wireless provider for their data needs.

GIS
The City and County have invested significant resources to develop a coordinated in-house GIS operation. The existing GIS environment is well positioned to support any future environment.

Radio System Overview and Key Findings
The City of Tallahassee and Leon County Sheriff operate an 800 MHz Motorola Smartnet-II, analog, trunked, simulcast radio system. The system is comprised of 22 radio frequency channels at six sites. The sites are linked via a microwave radio system. The radio system serves the City of Tallahassee Police and Fire departments, the Leon County Sheriff's office, the Leon County Emergency Medical Services, the Florida A&M University Police Department, Florida State University Police Department, the United States Marshalls Service, City of Tallahassee Regional Airport, the local community college and many others. As required by the State of Florida, Leon County also maintains a Med 8 (UHF) radio system in the event there is a need for mutual aid.

There are currently in excess of 3000 users of the system. The radio system serves the City as well as the entire County for public safety services. This is an area of approximately 700 square miles.

There are two PSAPs. The Tallahassee Police Department's PSAP receives 9-1-1 calls and dispatches Tallahassee City Police and Fire Departments. This PSAP has 13 radio console positions that are Motorola Centracom Gold Classic CRT type consoles. The Leon County Sheriff's Office also maintains a PSAP where they receive 9-1-1 calls and dispatch for the Leon County Sheriff's Office and the Leon County Emergency Medical Services. This PSAP maintains five Motorola Centracom Gold Elite consoles.

Florida State University (FSU) and Florida A&M University (FAMU) also dispatch their own units and both have consoles to serve that function. FSU has two Motorola Centracom Gold Classic CRT type radio dispatch positions. These two consoles are connected via leased T-1 lines back to the prime site. FAMU has two consoles, one of which is a Motorola Centracom Gold Classic CRT type console connected back to the prime site via leased T-1 line and the other is an RF control station type console. These users are also adversely impacted by the waning support for Motorola's Centracom series consoles.

The City of Tallahassee, Leon County, and the Leon County Sheriff's Office are exploring several options for the upgrade of its existing radio system. The following are options that are under consideration:

- Maintain the existing analog trunked radio system
- Upgrade the entire system to an APCO P-25 compliant system
- Consider becoming a use of the Florida State Wide Law Enforcement Radio System (SLERS)

9-1-1 System Maintenance
The 9-1-1 system is overseen by Leon County Sheriff's Office Division of Emergency Management. The County contracts with AK Associates to provide 9-1-1 system services. AK

Associates provides 24X7 support for all 9-1-1 related equipment and software. This includes 40 hours on site support per week, during regular business hours. Many of the products AK supports include the ECS 1000 digital Telephony 9-1-1 switches located at the Sheriff's Office and City PD. All of the PSAP computers and peripherals are also maintained at these locations and three remote locations at FSU, FAMU and Capitol Police.

Leon County purchased the on-site ALI records last year and AK is maintaining all imports and updates from the LEC as well as over a dozen CLECS. AK Associates also maintains a Selective Routing database. This database steers calls to the correct PSAP based on the ALI record associated with it. Additionally, AK Associates monitors call volume on the system to ensure trunking meets the technical requirements of the 9-1-1 State Plan.

4.6 Facilities

For each PSAP, our team documented the availability and purpose of each supporting office and room. This information was utilized to conduct our space needs assessment in Chapter 5.5.

5.0 ANALYSIS AND RECOMMENDATIONS FOR CONSOLIDATED EMERGENCY COMMUNICATIONS OPERATIONS

5.1 Governance and Organization

Merging organizations is a difficult change process from any perspective—personnel, technical, financial, or operational. These issues can be overcome by clarifying the level of leadership and the new organization that is driving the change as well as establishing clear governance rules to guide the change. Establishing a consolidated organization must be based on the vision and goals of the top leadership of the City and County in order to be successful. But having said that, the governance rules that will manage the consolidation are critical to the decision makers in that process.

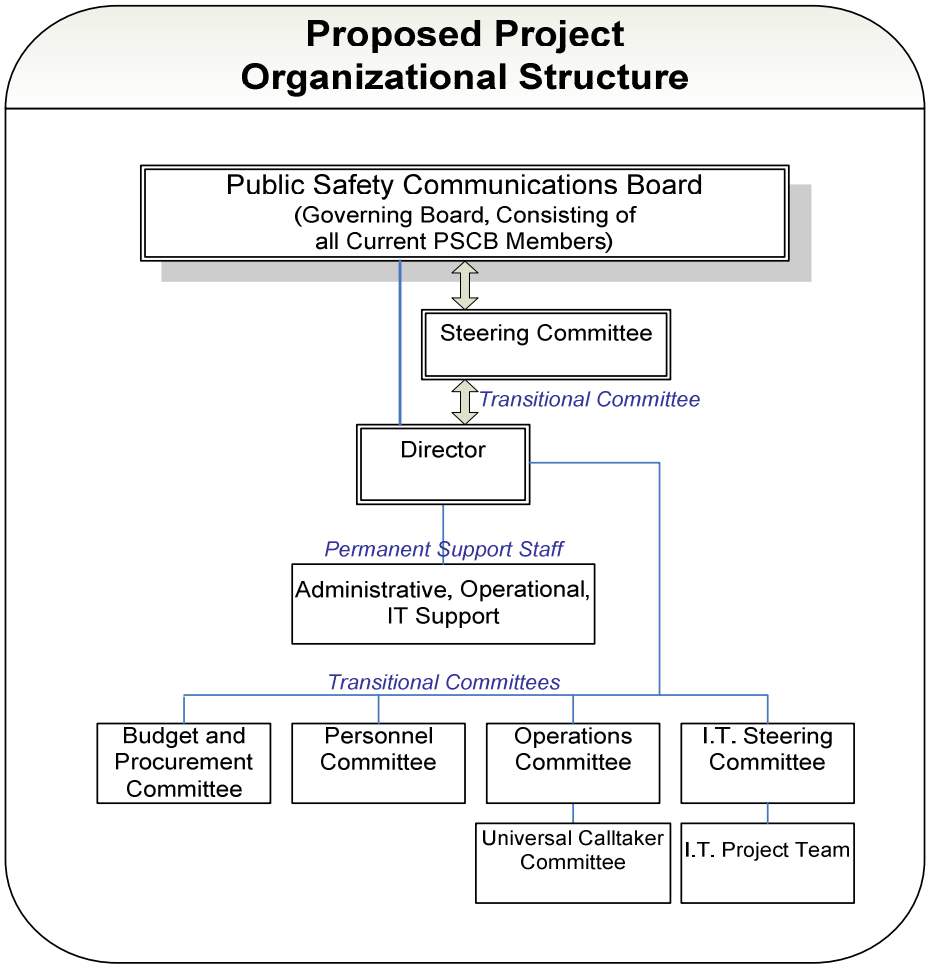
The issues of governance and organization are components of a larger, overarching category of elements that must be addressed to achieve optimal emergency communications consolidation; strategy and performance. Taking this into account, our team's recommendations for addressing the issues of strategy and performance for the consolidation of emergency communications are as follows;

A. Introduce a Governance and Oversight Structure for the Consolidation Project

The members currently serving on the Public Safety Communications Board (PSCB) include; the Leon County Administrator, Tallahassee City Manager, Leon County Sheriff, Interim Chief of the Tallahassee Police Department, Tallahassee Fire Department Chief, and Chief of Leon County Emergency Medical Services.

On Dec. 13, 2006, City and County leaders signed a Memorandum of Agreement (MOA) to ensure the creation of a joint dispatch center for the purposes of dispatching all law enforcement, fire and emergency medical services (Appendix 7.5).

The below organizational chart depicts the recommended project organizational and governance structure and the roles and responsibilities, and management responsibilities for the proposed governance structure.



Governing Board
The existing PSCB should set strategic direction for the new Agency, provide oversight of operations, and budget approval to promote accountability for service and results.

Functions of the Governing Board:

- Provide overall programming direction
- Approve budget
- Meet monthly to discuss operational and strategic issues
- Arbiter of operational and organizational conflicts
- Evaluation of the Director

Functions of the Steering Committee:

- Assist the Director in leading the development and implementation of the recommended solutions
- Oversee the establishment and functioning of the project Committees
- Provide agency end-users to serve on the project Committees
- Utilize the services of supplemental resources (term employees) to lead the project Committees
- Ensure that operational and technical solutions proposed by the project Committees meet the requirements of their respective agencies

The Steering Committee is composed of;

- One representative from each of the four public safety agencies (rank of Lieutenant or above/or civilian counterpart
- One leadership representative from each of the two PSAPs
- One management representative each representing the County/City/ Sheriff I.T. offices

Management Function - Roles & Responsibilities

In identifying opportunities for integrating the necessary management roles & responsibilities into the new organizational structure, five main levels of roles and responsibilities have been identified.

Role	Description
Governing Board	The Governing Board is accountable for the strategic and operational performance of the call center. This role is responsible for setting the strategic direction and policy for the call center. It is also the final arbiter of operational and organizational conflicts (the existing PSCB).
Steering Committee	The Steering Committee is responsible for assisting the Director in leading the development and implementation of the recommended solutions, providing agency end-users to serve on the project Committees, overseeing the establishment and functioning of the project Committees, and ensuring that operational and technical solutions proposed by the project Committees meet the requirements of their respective agencies
Director	The director role is responsible for translating the strategic direction provided by the PSCB into operational policy and plans and ensuring that these are implemented within the organization at the management and staffing levels.
Management	The management role is responsible for the day to day supervision and monitoring of staff. This includes providing staff with direction, overseeing the quality and efficiency of the work of staff, handling high priority issues that are escalated, and any specific employee concerns.
Staffing	The staffing role is responsible for the quality and efficient delivery of their specific functions.

Director
The Director will oversee daily coordination, management, and leadership of the Center's operational, technical, and administrative needs. The primary duties of this critical leadership position include:

- Serve as the Change Management leader
- Coordinating the development and management of the new agency
- Preparing and administering the annual call center budget
- Managing administrative staff supporting call center programs and systems
- Working with the Governing Board to resolve interagency issues
- Developing Standard Operating Procedures to govern daily management and operation of the facility and its shared systems
- Day to day coordination and management of the operational and administrative needs of the call center
- Acting as the key facilitator and negotiator and aid in decision-making among agency stakeholders
- Ensuring coordination of individual agencies using the facility or its resources
- Overseeing projects to enhance the call center's effectiveness
- Responding to the needs and direction of the Governing Board (PSCB)

The Director will report to the Governing Board (existing PSCB).

Possible Obstacles or Barriers to Implementation. The following items are noted as they could serve to affect the success of change efforts, as recommended and outlined:

Although it might be desirable to transition the current PSAPs directly to independent agency status, recognition of the magnitude and scope of the changes could place significant strain on Centers' operations and the workforce. A phased transition will allow for adequate planning to minimize potential negative impacts on service delivery. In addition, the phased approach will offer the ability to stabilize and address specific areas of vulnerability prior to full scale implementation of this recommendation.

One concern raised to our team was the possibility that the law enforcement stakeholders may not fully invest in an organization that will be transitioning outside of their agencies; given that the largets portion of the workload is Law Enforcement resource-driven, it is likely that this concern can be mitigated if the law enforcement, as well as Fire and EMS agencies maintain a presence in the new Center during and following the transition period. Other concerns could arise if the employees and budget are immediately removed from their existing organizations.

In 2006, Winbourne & Costas conducted a survey of independently managed Public Safety Emergency Communications Centers nation-wide, performed to determine the organizational placement and operational relationships of public safety officials (Police and Fire Department personnel), within these entities. The purpose of this survey was to determine the appropriate placement, and operational and technical relationship between Public Safety agencies, and independent Public Safety Emergency Communication Centers.

Table 1: Summary of Factors that Result in the Placement of Police and Fire Representatives in Independent Communications Centers

+ Driving Forces	- Restraining Factors
+ Standard performance measures that prohibit flexibility of dispatchers to take the time to consider additional factors to support resource allocation	– Limited staffing to support both field and communication center operations
+ Civilianization of center staffs is the industry standard	– Alignment of civilian and sworn "paramilitary – type" organizational leadership styles difficult to achieve

The findings of the survey is that most independently managed Public Safety Emergency Communication Centers have transitioned from direct representation of Police and Fire personnel at the operations level. Instead, most independent Emergency Communications Centers have senior level Police and Fire Representation on their Governance Board, providing oversight of the Center's operations, and setting high-level policies and procedures. However, those Centers that retain Police and Fire Personnel at an operational level utilize them primarily in an advisory capacity.

Given the degree and amount of change recommended to the operational structure and processes of the dispatch operations, we recommend that the Police, Sheriff, and Fire Departments introduce the concept of Uniformed Law Enforcement and Fire Officers (ULO/UFO) prior to transitioning the PSAPs to an independent agency. This deployment will provide support to ensure that the PSAPs can effectively achieve their mission during the difficult transition phase. Such representation already resides in the EMS dispatching discipline via the EMS "Controller" who is always on-duty with the EMS dispatcher at the Leon County PSAP.

Their duties should include:

- Serve as resource to Law Enforcement, Fire, and EMS Dispatchers
- Manage Agency assets during major incidents, and large scale events Manage the activation and deployment of specialized auxiliary units
- Assist in the development and implementation of new and updated policies and procedures
- Support training and process improvement activities
- Serve as technical resource to the Director and PSCB on issues pertaining to and impacting their individual departments.

Once transition phase is complete, which should be some time after the relocation of PSAP operations to the new call center facility, the PSCB should review the need and role of the ULO and UFO, and determine whether they should continue in their current capacity, be transitioned to an advisory role, or be eliminated.

B. Establish a Department of Public Safety Communications (DPSC) as an Independent Agency (in a Phased Transition) Reporting to the Public Safety Communications Board

Key Issue: Governance is a primary concern in any consolidation scenario for a PSAP. The ability to provide a strong central structure which is held as fair to all the participating jurisdictions is critical. Governance should be decided early on.

The overriding vision of City and County leadership for the consolidation of emergency communications resources centers on the creation of an independent agency, led by a Director, who leads, directs, and controls the consolidation effort and all resources to serve the best interests of the community and public safety agencies. Many stakeholders interviewed concur that a consolidated emergency communications system is the most effective model for providing efficient access to public safety resources.

The consolidation of emergency communications operations will be more cost effective and result in:

- Central dispatch authority
- A single point of contact for all public safety response
- Enhanced safety for responding emergency personnel
- Better information sharing
- Elimination of duplicate services
- Opportunities to purchase new technology more economically by the pooling of financial resources
- Ability to communicate directly with the entire County during large-scale incidents
- A more efficient delivery system when an emergency service are requested
- Interagency cooperation and oversight

Proposed Solution:
Most of the above benefits cannot be achieved with the mere co-location of existing operations into a new building. It is therefore recommended that the Center be located outside of the client agencies served to provide for sufficient capacity to build, manage and maintain strong and responsive service relationships with a diverse and expanding client base. An independent agency should be created, under new civilian leadership, to lead the emergency communications consolidation initiative.

Major Action Steps. We propose the following major actions for implementing the proposed solution to transition the emergency communications centers to independent agency. This should be implemented over a phased timeline, designed to mitigate the potential for adverse impacts on service delivery and the workforce. We also define a governance framework that will inspire confidence in the provision of effective PSAP services in a truly consolidated emergency communications environment. From this point on, the consolidated emergency communications operation will be referred to as the Department of Public Safety Communications (DPSC). It is recommended that the Blueprint 2000 agency development model be utilized to establish the new DPSC agency.

Stage One: Hire a Civilian Director to Lead the Emergency Communications Center

Key Issues: The present leadership structures will not suffice in a consolidated Center environment. An independent Director will provide strategic direction for the Center, manage operations and client relations, and ensure effective administrative support to the business while building positive working relationships with the workforce.

Proposed Solution: Develop a Position Description and recruitment strategy to identify and hire an experienced, professional PSAP Director. The Director can set the tone for effective center leadership and strategic issues, emphasizing visibility, engagement, credibility and transparency, employee involvement, respect, caring and concern. It should be noted that the Director's position description has been established by the PSCB and is currently advertised for nationwide recruitment in 9-1-1 and Emergency Management related publications and web-sites.

The Director will have the responsibility to lead the planning and implementation of the recommendations outlined in this report. We recommend that the Director operate outside of the existing Command structure for the PSAPs, reporting to the PSCB. In this model, the Director would work collaboratively with the current PSAP Directors, who would continue to oversee daily operation of their Centers such that the citizens of the City, County and client agencies do not experience a disruption in service levels as changes are planned and implemented. It is important for the City and County Sheriff to define, delineate and communicate the role of the Director so that the scope and boundaries of the Director role is clear to all stakeholders, to those supporting the transition, and to the current PSAP workforce.

Major Action Steps. We recommend the following major actions for implementing the proposed solution to ensure effective leadership of the new PSAP:

- Hire the Director early in the consolidation process so the Director can drive the consolidation and change effort while gaining institutional knowledge of the current PSAP's operations and administration.

- The Director's roles during the consolidation process should include:
  - Serving as the change management leader
  - Working with the PSCB to establish the new agency
  - Providing clear direction to the current PSAP Directors and support staff
  - Building and maintaining client relationships
  - Securing the necessary resources to effectively implement and run the operations
  - Working with legislative issues affecting 9-1-1 operations with the 9-1-1 Program Manager
  - Serving as primary point of accountability for the new PSAP's performance
  - Networking with colleagues (e.g., regional PSAP organizations) and members of the industry
  - Shaping and checking the 'health' of the current PSAP's climate and culture

We also recommend the introduction of a Deputy-level position to provide coverage for client service and administrative responsibilities as well as to serve in the Director's place when required.

Possible Obstacles or Barriers to Implementation. The following items are noted as they could serve to affect the success of change efforts, as recommended and outlined:

During the initial stages of implementation, the capacity to shape the Director's role could be somewhat limited by any unwillingness of current PSAP leadership and management to support a consolidation effort. Public safety leadership will need to ensure that their current Center Directors and liaisons provide full support to the new Director and the consolidation effort.

Stage Two: Establish Independent Agency Status
Establish the Emergency Communications Center as an independent agency. The new agency will provide emergency and non-emergency communications and information services to its existing user agencies.

This transition is reflective of a growing trend among PSAPs, including the City of Chicago, Illinois; City of New Orleans, Louisiana; City of Portland, Oregon; Cobb County, Georgia; and the District of Columbia, among other jurisdictions.

Our team recommends these key governance standards for adoption:

- Develop standards for PSAP governance early in the process to provide clear definitions for authority, obligations, representation and accountability for agencies and organizations that are part of the DPSC jurisdiction.

- Execute a Florida Statute Chapter 163 Interlocal Agency Agreement to delineate financial support, obligations, organizational structure, levels of cooperation, how disputes will be resolved, specifies service level expectations, and identifies accountabilities for costs, and scope of authority.

- Establish written policies defining policy development, operational standards, decision-making process, command protocols, service priorities and dispute resolution determined by a collaborative process of the parties

C. Establish an Organizational Transformation Plan

Key Issue: Consolidation is as much about "people" as it is about process and technology. During the development of a new Center's governance and organization the importance of organizational transformation must not be overlooked.

Proposed Solution: We recognize that there are strong emotional feelings held about the consolidation issue. By utilizing the below key tenets of organizational transformation as benchmarks for success all stakeholders, working together, will achieve a successful consolidation.

Major Action Steps. Effective organizational transformation is a deliberate, strategic process that proactively establishes, reinforces, and fosters the successful integration of people, purpose, leadership, technology, and process to achieve a desired, meaningful, and lasting positive change in a system.

During the latter part of 2006, Winbourne & Costas, made site visits to PSAPs in Nashville, Houston and San Francisco, all of which had undergone some form of 9-1-1 consolidation. The purpose of the visits was to focus on the organizational transformation and governance issues and lessons learned from the experiences of these 3 cities. Our team gained valuable information about the mistakes, the things done right and the critical lessons learned in the often neglected area of organizational transformation. A number of key lessons learned can be applied to this project as the PSCB moves forward with the planning, development, and implementation of the consolidation effort. Based on these lessons learned we recommend the following steps.

- Establish, document, and communicate an agreed upon common vision and an agreed upon uniform leadership and governance practice as early in the transformation process as possible
- Unify vision and strategy to meet the goals and objectives of the transformation through identified leadership, roles and responsibilities, and a clear decision making process based on accountability established by governance
- Engage stakeholders early, and obtain their support and commitment to the improvements associated with the transformation
- Engage in thorough timely and effective communication strategies that increase understanding and awareness among key stakeholders at all levels regarding; the purpose, vision, direction, and objectives of the transformation, and the importance of their roles and their contribution to the success of the transformation
- Develop effective and timely administered training programs
- Insure that information associated with the purpose, nature, scope, and objectives of the transformation is communicated to stakeholders in an accurate, timely, credible, and convincing manner
- Identify, analyze and evaluate the impact of the transformation on people, processes, organization structures, and technologies, and collaboratively, through engagement of stakeholders and end users, develop strategies to address those impacts
- Add credibility, reduce liability, and add value to training by using nationally accredited programs that provide certification to personnel
- Implement changes that affect the relationships of people, technologies, and processes in a systematic, considered, appropriately paced and sequenced manner to avoid disruptions in operations
- Do not forget to identify and manage cultural differences between public safety personnel from different agencies

All those involved in a consolidation effort should be kept informed of the progress. Providing timely and accurate information will stop misinformation (rumors), reduce uncertainty and fear of change. It also gives the staff of feeling of being included.

Input should be solicited from the staff of all four public safety organizations and communications center employees regarding the consolidation. Focus groups should be formed and an established line of communication should be developed for soliciting and acting on employee input. Seeking out employee input not only brings new ideas to the process but perhaps more importantly it gives the employees a sense of being part of a team effort where they are valuable.

D. Set the Guiding Vision for New Organization and Center, Ensuring Representation of the Broadened Client Base it Serves; Clarify its Mission and Chart the Strategic Direction

Key Issues: The vision for the future of new Center must be set collaboratively with involvement from the Client Agencies and/or representation from citizens served.

The PSAPs do not currently have viable mission statements. Furthermore, a substantial segment of the DPSC workload involves non-emergency communications and the management of public safety information.

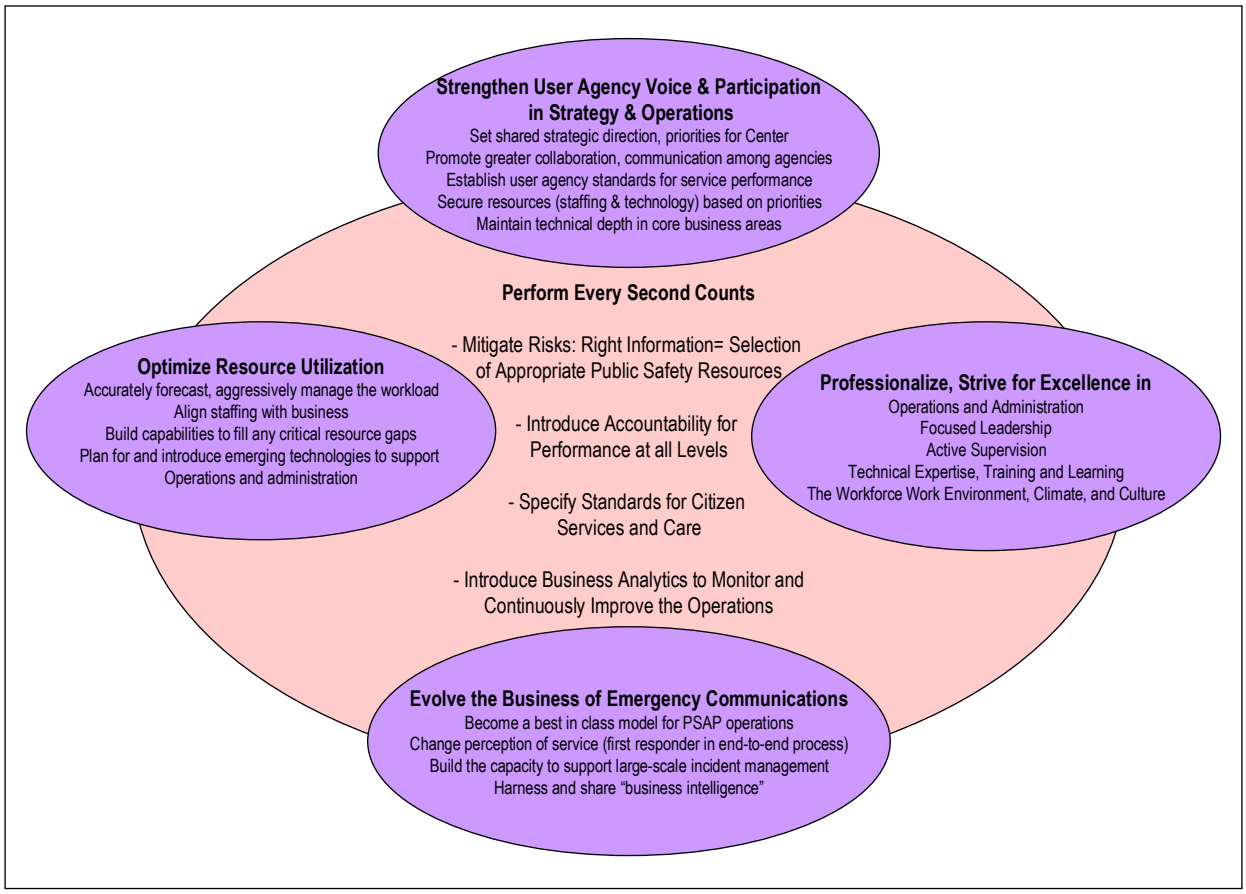
The PSAPs do not have strategic plans. PSAP staffs expressed that the vision and mission of the PSAPs are unclear.

Proposed Solution: Set a guiding vision for the Center that addresses client stakeholder and citizen expectations for results. The vision ultimately will guide the business lines that the PSAP will support, affect its placement/repositioning in the broader City/County government hierarchy, and drive the re-structuring of its internal operations to facilitate effective performance. Clarify the call center mission to focus primarily on emergency communications, response and resolution. Prepare a strategic plan that articulates the shared forward direction for the PSAP and outlines the steps necessary to achieve the desired goals.

Major Action Steps. We recommend the following major actions for implementing the proposed solution to set the guiding vision, clarify the mission and chart the strategic direction of call center:

- Establish a Client User Group composed of representatives from the public safety agencies and other City and County representatives. Circulate the consensus vision model, shown below, to principal stakeholders and the Client User Group for review, consideration, and approval.

- Identify principal stakeholders to participate in a facilitated working session with the Client User Group to confirm the DPSC vision, referencing the consensus vision as a starting point, and to clarify the mission of the PSAP based on the guiding vision established by session participants.



- Assign responsibility for documenting the vision, and mission of the PSAP; draft the guiding vision and mission statement; publish and promote the final version to Client Agencies, the workforce and to citizens.

- A mission statement should be developed that clearly conveys to PSAP stakeholders, employees, and the public the goals of the City/County in communicating with citizens when emergencies occur, and in responding by arranging for and coordinating the appropriate public safety resources. The mission statement below, excerpted from another County's PSAP organization, speaks to the public in terms it can relate to, describes the role an employee plays in the process, and acknowledges the coordination required to deliver effective public safety services.

Representative PSAP

"Central Lane 9-1-1 is the communications gateway for regional emergency services. We connect citizens with the public safety services they need. We calmly guide callers through crisis, obtain and relay vital information, and provide radio support to police, fire, and emergency medical responders."

Possible Obstacles or Barriers to Implementation. The following items are noted as they could serve to affect the success of change efforts, as recommended and outlined:

- Obtaining agreement across the various stakeholders on the guiding vision for the PSAP may prove challenging if there are widely divergent views among group members; it will be important for the PSCB and/or the City Manager, County Administrator, County Sheriff, and Director to act as an arbiter in resolving potential conflicts that may arise, and in leading the group to a shared vision for the PSAP.

E. Establish the Transitional Committees Necessary to Develop the Organizational and Operational Structures, Processes and Plans for the New Center

1. Establish an Information Technology Committee to begin planning for the migration of Technology to the existing and future PSAPs. This is a transitional, not a permanent Committee

Key Issues: Planning for the migration of existing technology to the new Center should begin immediately. The detailed inventory of all applications, systems and technology as well as any new/enhanced technologies to be installed in the Center must be validated by the public safety agency stakeholders.

Proposed Solution: Implement an effective DPSC I.T. Project structure to assist the City/County/Sheriff I.T. leadership in developing the I.T. migration plan for the DPSC

Major Action Steps. We recommend the following major actions for implementing the above proposed solution.

Organize a multi-agency I.T. Steering Committee composed of decision makers of all four public safety agencies, each PSAP, and County/City IT to document the activities that need to take place and direct the delivery of the technology as well as the technology operations and support structures within the DPSC. The Steering Committee provides the overall direction regarding technology decisions and coordinates approval of Systems and Technology components. The Steering Committee should prepare a Charter which clearly defines the membership, scope, roles and responsibilities, and method of operation. Also, the Committee should coordinate its work

with the PSCB, Operations Committee, Universal Call Taker Committee, and Architectural and Engineering project team.

The goals of the **I.T. Steering Committee** are to:

- Coordinate the implementation of technology and associated support structures to optimize emergency and operational preparedness, coordination, communication, and response by the primary stakeholders of the facility – Police, Sheriff, Fire, and EMS
- Improve efficiencies through economies of scale and by reducing duplication of I.T technology, service, and effort through an extensive use of interoperability
- Ensure the delivery of the technology for the facility within the targeted budget and schedule in conjunction with City/County/Sheriff I.T.
- Provide for the implementation of the technology on an expeditious schedule to have full utilization of the facility at the earliest time
- Develop migration plans for agency-specific operations and systems to transition to the DPSC while maintaining operational capabilities during the transition to include back-up facilities and systems and to support the implementation of the approved migration plans

The scope of the Steering Committee includes the design, implementation, operation and support of the following technology areas, in addition to the base technical infrastructure:

- Telephone
- Radio
- Audio/Visual
- Networks - including internal and external connections
- Servers, desktop and printers
- Security
- All applications resident at the facility

Additionally, a Project Team should be established to develop and implement the recommended systems and components. The **Project Team** is responsible for:

- The development, evaluation and recommendation of individual systems and technology components.
- Assisting the City/County/Sheriff I.T. leadership in development of the implementation schedule/Migration Plan
- Overseeing detailed requirement collection for technology acquisition, installation and ongoing support based on operational requirements
- Validating adequate infrastructure to support the defined requirements
- Validate the shared technology resources to enable appropriate operations and management

Agency Leads: Each public safety agency on the Steering Committee will have an individual on the Project Team that will represent the agency to ensure the technology solutions proposed to the Steering Committee meet the requirements of their respective agencies.

Technology Leads: Technology Leads will oversee the technology design, procurement, implementation and operation of each key system. They will present their plans to the Steering

Committee for approval and provide periodic updates on status and issues. The technology leads will coordinate design and evaluation tasks with interested agency leads.

Project Manager: The Project Manager will support the Steering Committee by providing a coordination role and manage various project tasks including the coordination of technology project activities, including those of the contractors, tracking the technology schedule, coordinating the evaluation and resolution of issues, coordination of the interoperability structures, organizing the meeting activities, and maintaining project documentation in a central repository.

We understand that the City, County, and Sheriff I.T. departments may not possess sufficient resources to meet the staffing requirements of the I.T. Project Team or the resources required to develop the new Center's implementation schedule/Migration Plan. Therefore, we recommend that additional resources be retained to support the implementation of the above goals and objectives. These additional resource needs are addressed in Section 6 below, "Supplemental Staffing Requirements" and in the Project Budget that is an Appendix to this report.

2. Establish an Operations Committee to take the leadership role in the migration of PSAP operations to the DPSC. This is a transitional, not a permanent Committee.

Key Issues: Planning for the migration of operations to the new Center should begin as soon as the new Director is hired. The operational requirements of the new Center must be assured upon transition.

Proposed Solution: The new Director must establish an effective DPSC Operations project structure to support the migration plan, back-up/continuity of operation plans, and assure effective operations upon transitioning to the new Center.

Major Action Steps. The Director should establish an Operations Committee to take the leadership role in the migration of PSAP operations to the DPSC. The Operations Committee will assure public safety agency representation during the development and implementation of DPSC operations and standard operating procedures. The Operations Committee should focus on how the DPSC will function from three perspectives: (1) the operations floor (2) management coordination and (3) standard operating procedures. The Committee should coordinate its work with the PSCB, IT Committee, and Architectural and Engineering project team.

3. Establish a Personnel Committee for the purpose of determining the appropriate level of administrative support staffing and developing a personnel system combining the County and City systems to support the current and future staffing requirements. This is a transitional, not a permanent Committee.

Establishing a smooth transition of the personnel into the new organization is critical to the success of the organization to meet its goals and to provide the best communications services to public safety operations and the public. To achieve a smooth transition, a personnel committee will be established to identify the personnel elements necessary to compose then new

organization's personnel structure. The Director, leading the personnel committee with PSAP leadership support will need to address the issues described in Chapter 5.2 of this report to develop a personnel staffing structure.

Additionally, the new organization will require support staff to provide assistance for all functions that will be managed by the Director. The Director will work with Leadership and the PSCB to identify the necessary support positions. These positions may include the following:

- Deputy Director (Client services, human resources, administrative responsibilities, outreach)
- Administrative Support (front office administrative support)
- Budget Analyst (research grant opportunities, applying for grant funding, assist the Director with budget projection, and preparation and accounting of expenditures incurred for personnel, facilities, I.T. and other operational costs)
- Facility Manager (Building operations, maintenance, and building and property security)
- IT Manager (call center computer and communications issues)

4. Establish a Budget Committee (County, City, TPD, LCSO, Fire, EMS) lead by the Director and supported by a supplemental personnel resource. This is a transitional, not a permanent Committee.

The role of the **Budget Committee** is to:

- Identify existing budgets related to each operation (fund cites, etc)
- Identify all current funding restrictions
- Identify all current revenue streams contributing to current PSAP budgets
- Identify, with Personnel Committee, best salary table and benefits (Personnel Committee will design personnel position assignments with current PSAP leadership)
- Build upon and refine the estimated budget presented in this report

5. Establish a Universal Emergency Dispatch Committee, lead by the Director, with support from a supplemental personnel resource, and composed of members of the Operations, Personnel, and Technology Committees with input from ad-hoc members of other committees as necessary. This is a transitional, not a permanent Committee.

One of the primary objectives of consolidating emergency communications center operations is to enable a single “universal” dispatcher to receive and process all 9-1-1 calls, regardless of the service requested.

Universal call taking and dispatching is a service delivery approach that integrates technology, processes and people. Moving to this new service delivery model will eliminate numerous transfers for public safety services between PSAPs thereby reducing processing time for emergency calls for service. Migrating all public safety agencies to a common CAD, modifying console technology, and designing standard operating procedures that are aligned with the new service delivery approach will pave the way for implementation of the universal dispatcher model. Due to the discipline specific nature of Fire and EMS dispatching we do not recommend

they become a part of the universal dispatching initiative. As such, Fire and EMS dispatching are not noted in the table that follows.

A significant transitional step to the universal dispatcher model is employee training.

Current Call Taker/Dispatcher Skills Table Applicable to Universal Dispatch								
Employee	**Org.**	**Police 9-1-1**	**Sheriff 9-1-1**	**EMS 9-1-1**	**Police Dispatch**	**Sheriff Dispatch**	**Fire Dispatch**	**Non-Emergency**
1	TPD	Yes	No	No	Yes	No	Yes	Yes
2	LCSO	No	Yes	Yes	No	Yes	No	Yes

Future salary schedules can be based on the number of skill areas attained and utilized by each employee.

6. Supplemental Personnel Resources

Based on the resource demands required to lead and support the various recommended Project Committees and our understanding of City/County/Sheriff staffing constraints, we recommend that supplemental staff be acquired to support the project Committees. The support staff can be hired as term employees of the new agency for the life of the project. At the conclusion of their term, the employees would be encouraged to apply for any existing City/County position vacancies. We recommend that five (5) term employees be hired to support the project Committees; one for each Project Team/Committee except the I.T. Steering Committee, which is composed entirely of City/County/Sheriff I.T. Staff.

5.2 Personnel and Staffing

Personnel

The Sheriff's Office and Police Department have each established staffing and management levels based on existing business processes, workloads, complexity, and criticality of their operations.

The Personnel Committee (recommended in Chapter 5.1, E, 3) and PSAP leadership will need to address the following issues to develop a personnel staffing structure:

- Determine personnel transfers to the new organization (See benefits and barriers in Table below) – critical step for success of the organization's structure
- Determine personnel staffing levels (See staffing section below)
- Establish a salary plan – the personnel committee will need to work closely with the finance committee to structure a plan that benefits the retention of current personnel as well as develops an appealing structure for recruitment.
- Identify a benefits plan – the personnel and finance committees will need to establish a grandfathering plan to protect current plan enrollees from loss of benefits. Also, the benefits plan transition should be timed and adequately advertised to the new organization's employees to provide them sufficient time to decide on benefit selections.

- Identify a retirement plan - the personnel and finance committees will need to establish a grandfathering plan to protect current plan enrollees from loss of retirement benefits. Current employees should be given the opportunity to maintain current or transition to the selected retirement plan without penalty or loss of retirement value and benefits. Also, the retirements plan transition should be timed and adequately advertised to the new organization's employees to provide them sufficient time to decide on plan selections.
- Establish a hiring process which includes standardized screening for applicants – the personnel committee can streamline the hiring process sufficiently to better promote the vacancies and evaluate the potential employee for the position.
- Establish a common work schedule (8 hour schedule preferred with a 12 hour surge capability design)
- Develop a work organization with lines of communications, control, and supervision – establishment will be done immediately with the agreement for governance and organization by the PSCB and executive leadership. The personnel committee can work with the new organization's leadership to develop an internal organizational structure.
- Establish a transition plan to the new organization
- Establish a work plan to relocate to new facility
- Identify uniform / dress standards (if new uniforms – need budget input)

A review of each staffing source revealed potential barriers and benefits for consideration and resolution. A summarization of these factors and the process required to consider selection of each option is presented below:

Table 5.2.1: Staffing Source Options

Transfer all staff from the Tallahassee Police Department Communications Center	
Selection Process: All resources from existing Police operations are integrated into the PSAP to support its operations.	
Benefits	**Barriers**
Moving existing staff offers quick deployment opportunity	Pay, benefits disparity issues
Institutional Knowledge – Police and Fire Dispatch services	Maintenance of Teletype functions under Law Enforcement Control; Fire Dispatch operations
Eliminate staff displacement	Maintenance of Switchboard functions

Transfer all staff from the Leon County Sheriff's Office Communications Center	
Selection Process: All resources from existing LCSO operations are integrated into the PSAP to support its operations.	
Benefits	**Barriers**
Moving existing staff offers quick deployment opportunity	Pay, benefits disparity issues
Institutional knowledge – Sheriff and Emergency Medical Dispatch services	Maintenance of Teletype functions under Law Enforcement Control; Emergency Medical Dispatch operations
Eliminate staff displacement	Maintenance of Switchboard functions

Hire new staff for the PSAP	
Selection Process: Identify candidates from eligible's on existing examination lists, and aggressively advertise for additional applicants. This is an on-going process to fill vacancies for current as well as future operations.	
Benefits	**Barriers**
Hires would be based on established standards	Potentially lengthy position development (call taker) and recruitment process, standards between existing operations will need to be developed
Uniform salary range for incoming call takers	9-1-1 staffing a challenge throughout industry. Particularly challenging in recruiting from limited pool of qualified candidates.
Personnel levels	Training for all position operations required – meeting certification requirements – extends 9-1-1 training

Taking into account current and future needs for PSAP operations, we recommend that all existing PSAP employees be transitioned into the new agency. All staff hired subsequent to the establishment of the new agency will also become employees of the new agency.

Consolidated Personnel Services

Efficiencies will be realized by combining the LCSO & TPD Communications Centers into one organization as an independent agency. The new agency will be consolidated into one facility and will assume all responsibility for budget, personnel, equipment, operations, training, and support.

1. Consolidation will reduce hiring and advertising costs since both organizations basically do the same recruitment advertising in the same publications. Significant improvements will be

evident with one strong voice for recruitment for the local (County and City) communications operations since there is such a draw upon available resources by the state government agencies.

2. Consolidation will streamline personnel hiring processes, improving personnel evaluation processes, eliminating unnecessary personnel evaluation services (polygraph evaluation), and improving the standardization of personnel services to the employee.

3. Consolidation will significantly improve the training process. With the formation of the new organization and facility, equipment standardization will be necessary to support the best technical service. The standardization will translate into a more uniform training curriculum for the dispatcher improving the training efficiency and trainee evaluation processes.

4. Consolidation will improve coordination between different dispatch sections and support a uniform analysis process of dispatcher job performance. Job performance analysis leads to improved processes and a safer dispatch environment for public safety communications and operations.

5. Salary and benefits for the dispatchers can be standardized and improved – gaining greater retention support and improving the recruitment process for new dispatchers.

6. A Chapter 163 Interlocal Agreement will need to be established between the new organization and the City and County to support budget, benefit, and personnel services required of the new organization.

7. Staffing levels and work schedules can be standardized with an emphasis on an 8 hour work shift versus 12 hours which will improve dispatcher attention and performance. This is addressed in more detail in the Staffing section below.

8. The personnel who provide the recording and logging call analysis processes will gain efficiency through a standardized and streamlined support of the dispatch operations and investigative services call analysis requirements. A Standard Operating Procedure will need to be developed which defines an efficient call analysis and extraction process.

9. Supervision of dispatch personnel will be improved with a more direct supervisory role within the single organization with a single set of personnel rules of performance standards and requirements.

10. Certification programs can be enhanced and developed for the dispatchers to promote improvements in dispatch operations, meet accreditation standards, and meet the required certification levels for Emergency Medical Dispatch. To meet the public safety needs for efficient dispatch of Emergency Medical Services, the new organization will require a strong certification program for Emergency Medical Dispatch. A barrier to address will be to identify how many of the call-takers / dispatchers will require EMD Certification to meet local, state and federal standards for EMD services.

Training

The training program can be one of the most important elements of a public safety communications organization. An effective and dynamic training program will not only train the dispatchers to a specific level of expected performance, but be capable of reacting to changes to laws or requirements to effectively and adequately modify the performance levels of the assigned personnel. Likewise, an effective training program will document the levels of training, manage certifications, and be available to assist supervisors and management in the identification of areas of improvement through quality assurance assessments and performance measurements established by the new organization.

At present, the LCSO and TPD 9-1-1 training programs adequately prepare and maintain the current dispatcher performance standards and expectations. Each program is structured to maintain the dispatch operations service levels for their respective assigned public safety organizations.

LCSO 9-1-1 operations support the Leon County Sheriff and Emergency Medical dispatch. The dispatchers are required to complete the National EMD certification program for continued employment.

TPD 9-1-1 operations support the City of Tallahassee Police and Leon County Fire dispatch. No national level certification program is required by TPD dispatchers.

Both existing organizations have strong and capable training programs with effective managers of each to meet the requirements for dispatch training. Consolidating both programs will not be difficult. Determining complimentary training curriculum and developing a training transition plan will be key objectives to the success of the new training program.

The new organization will need to clarify the level of training for each communications member to establish the best mix of call-takers and dispatchers to support the public safety communications goals and services. This stair step approach will benefit the organization by giving adequate levels of knowledge and timely experience to support certification and training levels required by the communications center. Most notably the determination that must be made for the number of personnel requiring National EMD Certification as currently maintained in the LCSO Communications Center.

The EMD certification requirement will need to be addressed to County and City leadership to determine the extent of the National Certification throughout the newly consolidated organization. A Standard Operating Procedure can be developed that clearly identifies the requirements for the National EMD Certification within the new organization.

Fire Department and Emergency Medical Dispatch

Due to the discipline specific requirements of Fire and Emergency Medical Dispatch it is our recommendation that these disciplines also retain their dedicated dispatching functions at this time. Current dispatch operations will continue as the new organization is identified and structured. When the transition plan is developed, a focus should be on retaining the current levels of dispatch operations as presently (physically) assigned. As the development of the call-

taking services for universal call-taking are developed, the new organizations leadership can assess the dispatch operations and develop, with the personnel and training committees, a plan to expand training and certification of personnel in the dispatch operations of fire and emergency medical dispatch.

Current EMS dispatching levels will be sufficient for the immediate service support but will need to be analyzed for future operations under a consolidated (physical) operation and in light of expanded service requirements to meet expected population growth.

Staffing

The following recommendations are based on our estimates of combined City/County PSAP call volume; we then translated that call volume into staffing requirements. We considered several factors in addition to call volume in constructing a model to predict staffing. These factors are described below.

Sizing Assumptions

9-1-1 – Emergency Calls for Service		
Sizing Metric	**Sizing Assumption**	**Reasoning**
Service Level	**90%** of calls are answered within 10 seconds	• State of Florida *9-1-1 Emergency Telephone Number Plan* technical standard
Average Call Length	**101 seconds** (2005 avg. of LCSO 124 and TPD 78 = 101)	• Experience of other 9-1-1 PSAPs • Review of City and County dispatch operations
Average Call Wrap Up Time	**60 Seconds** (1 minute)	• Experience of other 9-1-1 PSAPs • Observation of City and County dispatch operations
Call Volume Distribution by Shift	Day Shift: **40%** of daily calls Evening Shift: **40%** of daily calls Midnight Shift: **20%** of daily calls	• Experience of other 9-1-1 PSAPs and 24x7 call centers • Review of City and County dispatch operations

7 Digit Non-Emergency Lines		
Sizing Metric	**Sizing Assumption**	**Reasoning**
Service Level	**90%** of calls are answered within 10 seconds	• Callers whose calls are not answered quickly may hang up and dial 9-1-1
Average Call Length	**40 seconds**	• Observation of City and County dispatch operations • City MIS
Average Call Wrap Up Time	**10 Seconds**	• Observation of City and County dispatch operations
Call Volume Distribution by Shift	Day Shift: **40%** of daily calls Evening Shift: **40%** of daily calls Midnight Shift: **20%** of daily calls	• Review of City and County dispatch operations

As described earlier in this report, the proposed Service Level Objective for the speed to answer all calls received at the new Center is based on the Florida State Technology Office (STO), Florida E-9-1-1 Plan, Technical Standard Number 4 of Section 3.4.1.1, which requires that 90 percent of all voice calls during the average busy hour be answered within 10 seconds of arrival at the PSAP. Additionally, the National Emergency Number Association (NENA) Call Taking Operational Standard/Model Recommendation, NENA 56-005, effective June 10, 2006, for answering 9-1-1 Calls is also that Ninety percent (90%) of all 9-1-1 calls arriving at the Public Safety Answering Point (PSAP) shall be answered within ten (10) seconds during the busy hour.

Using our previous volume calculations[5] and sizing assumptions described above, the team utilized an Erlang Call Center Staffing Model to help estimate the number of call takers that would be required in the PSAP.

The Erlang distribution is a continuous probability distribution developed by A. K. Erlang to examine the number of telephone calls that might be made at the same time to the operators of a call center. Erlang-C calculators are widely used throughout the world to estimate traffic for Call Centers, help desks, checkout queues and other processes where customers may wait in a queue.

The staffing model is estimated to match staffing resources with hourly workloads throughout the busiest days. Call taker staffing should be adjusted for less busy days and hours. The advantage of this model is that the Center will achieve high levels of service at all hours of each day.

The tables below show the total number of call takers positions required for the peak shift(s) only, and is indicative of the number of seats required at PSAP. It assumes that 9-1-1 call

[5] The combined 9-1-1 and non-emergency line annual call volume is approximately 832,602

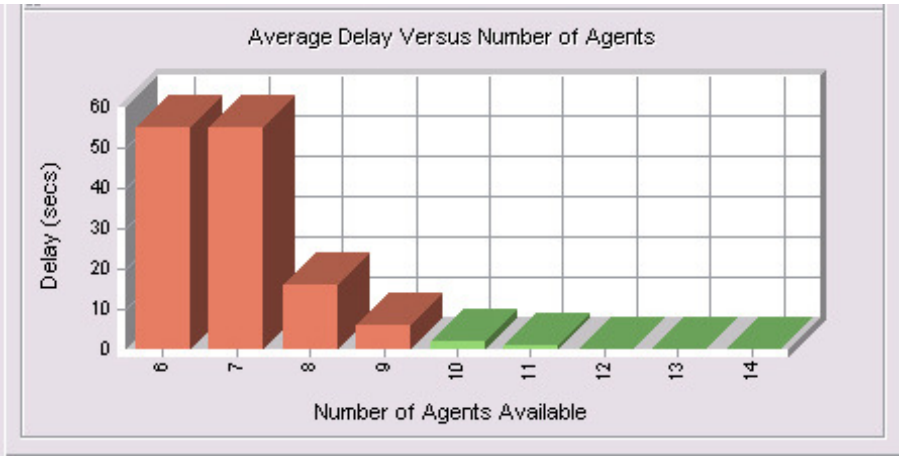
volume will continue to increase at 7% annually. An assumption is also made that non-emergency call volume increases similarly and will continue to do so if no action is taken to provide callers with alternatives to calling the non-emergency numbers.

Staffing Requirements

2007 Call Taker Staffing Recommendations

9-1-1 and Non-Emergency Lines	2007 Operations
Volume	832,602 calls per year (assuming 7% per year growth from 1/07 to1/15)
Calls Per Hour (Peak Shift)	296
Average Combined Talk Time	70 Seconds average combined talk time (with 9-1-1 as 20% of calls)
Average Combined Wrap-Up Time	20 Seconds average (with 9-1-1 as 20% of calls)
Quality of Service	90% answered in 10 seconds
Number of Call Takers	10 at peak hour

The below table illustrates how the availability of agents affects the quality of service.



The 10 call taker at peak hour ratio is a combined total for both TPD and LCSO calls. As the ratio of calls received is currently approximately 54% for TPD and 46% for LCSO this information can be utilized by current management to more efficiently deploy call taking staff. It is recommended that staffing on the midnight tours of duty at each PSAP be reduced from their current levels and those personnel added to the day and evening hours to better meet workload demands. The below staffing recommendations are based on the data contained in the charts and graphs in Chapter 4.3 of this report.

Shift schedules should be centered on 3 tours of duty;
Shift 1: 11:00 p.m. to 7:00 a.m.
Shift 2: 7:00 a.m. to 3:00 p.m.
Shift 3: 3:00 p.m. to 11:00 p.m.

City of Tallahassee Police Department PSAP	
Current (Weekly)	**Proposed (Weekday)**
11:00 p.m. to 7:00 a.m.: 4 call takers	11:00 p.m. to 7:00 a.m.: 3 call takers
7:00 a.m. to 3:00 p.m.: 4 call takers	7:00 a.m. to 3:00 p.m.: 5 call takers
3:00 p.m. to 11:00 p.m.: 4 call takers	3:00 p.m. to 11:00 p.m.: 5 call takers

Leon County Sheriff's Office PSAP	
Current (Weekly)	**Proposed (Weekday)**
6:00 a.m. to 6:00 p.m.: 5 call takers	11:00 p.m. to 7:00 a.m.: 3 call takers
6:00 p.m. to 6:00 a.m.: 4 call takers	7:00 a.m. to 3:00 p.m.: 4 call takers
	3:00 p.m. to 11:00 p.m.: 4 call takers

Again, as this staffing model is based on peak workloads and does not take into account months of decreased activity, downward seasonal adjustments in staffing can be made. Additionally, the recommended number of call takers working should be reduced on Saturday and Sunday at each PSAP and re-deployed to weekdays in order to meet weekday staffing needs and provide discretionary time to be utilized for training and other duties. Further, success in reducing the amount of calls received on the police and sheriff non-emergency lines could ultimately reduce demands on call takers who can then be available for other duties i.e., dispatching and training.

Law Enforcement Dispatching
The following findings coincide with our recommendation to re-align the LCSO PSAP to 8 hour tours of duty.

Based on the number of PSCOs required to staff call taking and dispatch positions to meet the recommended staffing levels for the LCSO PSAP, our team made the following findings. The current total number of Communications Officers and Lead Workers employed (32) is six positions short of the number necessary to meet the recommended staffing requirements based

on current workload demands[6]. We recommend that the LCSO minimally staff at least 4 additional vacant positions at this time.

Current LCSO Communications Officer Position Staffing
Authorized: 36 (32 Communications Officers & 4 Lead Workers)
Actual: 32
Deficit: 4

2007 Recommended LCSO Communications Officer Position Staffing
Call Takers: 19.4
Dispatchers: 18.9
Total Communications Officer Staffing: 38.3

The above staffing levels are necessary to implement the 8 hour shifts recommended for the LCSO PSAP while meeting the recommended service level objectives and the need to utilize work schedules that will improve dispatcher attention and performance (Section 4.4).

TPD PSAP
Based on the number of PSCOs required to staff call taking and dispatch positions to meet current and recommended staffing levels for the TPD, our team made the following findings.

The TPD does not have enough authorized/budgeted PCSO positions filled to achieve the staffing levels required to consistently meet their minimum dispatch position requirements. The necessity to provide 24/7 coverage for 6 dispatch positions, combined with the recommended 2007 call taker staffing requirements above indicates that the TPD is understaffed by approximately 10 positions, 3 more than are currently budgeted for.

Current TPD PSCO Position Staffing
Authorized: 53
Actual: 46
Deficit: 7

2007 Recommended TPD PSCO Position Staffing[7]
Call Takers: 23.4
Dispatchers: 32.4
Deficit: 10

The current staffing deficit results in call takers or Shift Supervisors being utilized to provide meal and personal breaks to the six dispatcher positions. Additional PSCO staffing could provide availability for a dispatcher assistant during critical incidents (vehicle pursuit,

[6] (3.5 dispatch positions x 3 shifts = 10.5 x 1.8 relief factor = 18.9 - 11 call taker position ÷ 3 shifts = 3.6, x 3 shift = 10.8 x 1.8 relief factor = 19.4)

[7] (6 dispatch positions x 3 shifts = 18 x 1.8 relief factor = 32.4 - 13 call taker position x 1.8 relief factor = 23.4)

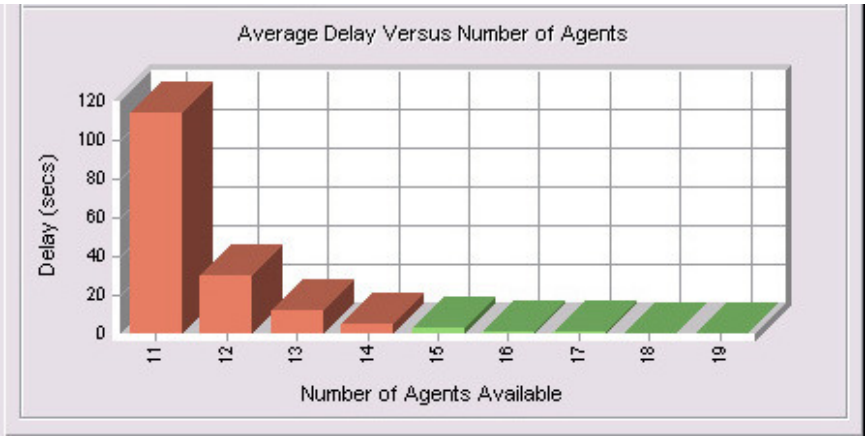
hostage/barricade situation) without impacting call taker or supervisory staffing and also reduce the dependency on overtime pay to meet minimum mandatory staffing requirements.

Taking into account the possible future consolidation of law enforcement dispatching it may not be advisable to staff all 10 recommended positions at this time. However, we recommend that a vigorous recruiting effort be established in order to hire at least 6 more PSCOs as soon as practicable.

Year 2015 Call Taker Staffing Recommendation

9-1-1 and Non-Emergency Lines	Consolidated Operations: January 2015
Volume	1,221,879 calls per year (assuming 7% per year growth from 1/07 to1/15)
Calls Per Hour (Peak Shift)	415
Average Combined Talk Time	70 Seconds average combined talk time (with 9-1-1 as 20% of calls)
Average Combined Wrap-Up Time	20 Seconds average (with 9-1-1 as 20% of calls)
Quality of Service	90% answered in 10 seconds
Number of Call Takers	15 at peak hour

The below table illustrates how the availability of agents affects the quality of service.



Our **staffing** recommendations for year **2015** are as follows**.** Based on the information contained in Chapter 4.3 of this report, including the "Combined Agent Coverage 9-1-1 Call Volume by One Hour Intervals" graph, the LCSO and TPD "Non-emergency Line Count" tables, and the "Total Incoming Calls Combined Trend, September 17 to September 23, 2006" graph, the busy days and hours of the week are currently Monday through Friday, 7:00 a.m. to 11:00 p.m. with 80% of all daily calls spread fairly evenly across all those hours. Calls received between 11:00 p.m. and 7:00 a.m. currently account for approximately 20% of daily calls.

Shift schedules should be centered on 3 tours of duty;
Shift 1: 11:00 p.m. to 7:00 a.m.
Shift 2: 7:00 a.m. to 3:00 p.m.
Shift 3: 3:00 p.m. to 11:00 p.m.

Call taker deployment should be as follows:
Shift 1: 5 call takers
Shift 2: 15 call takers
Shift 3: 15 call takers

As this staffing model is based on peak workloads and does not take into account months of decreased activity, downward seasonal adjustments in staffing can be made to provide increased opportunities for training and annual leave requests based on the "TPD and LCSO 2005-2006 9-1-1 Monthly Calls Answered and TPD Non-Emergency Calls Answered" graph in Chapter 4.3 of this report.

The total number of 35 call takers needed each day by **2015**, must be combined with a relief factor to calculate the total number of employees necessary to staff these positions. The Relief Factor is a percentage that, when added to the number of equivalent personnel necessary to staff a post, provides additional equivalent personnel to ensure coverage for regular days off, vacations, holidays, and other activities such as training that takes employees away from the institution during the course of the year[8].

The factor varies among private companies and public safety communications centers, depending upon the employees' benefits (2-5 weeks vacation, 12-20 sick days per year, etc.), and how the employees use their benefits (always use sick leave they earn, have banked up many years worth of vacation, etc.)[9]. The private sector uses a standard relief factor of 1.7, and our survey of public safety agencies indicates an average relief factor of 1.8. Therefore, 1.8 is utilized as the benchmark for planning purposes. Based on this information, the consolidated PSAP operation will need to staff approximately 63 full time call taker positions by 2015 in order to meet the desired Service Level Objective. This does not include the number of dispatcher positions that are also needed.

[8] State of Oregon Department of Corrections, Staff Deployment System, DOC Policy 40.2.1
[9] NENA News, Bill Weaver, Relief Factor

For **facility** purposes, based on projected peak call volume and staff deployment developed in this section, the new Center requires 15 call taker positions, 13 public safety dispatcher positions, plus 3 supervisor positions. In addition, the Center will require two teletype positions. Additional facility considerations are addressed in Chapter 5.5.

Law Enforcement Dispatcher Staffing Requirements
Because of the differing requirements for police and sheriff dispatching (regarding the initiation of CAD events by dispatchers and other factors) in the current PSAP configuration it is not possible to determine what the appropriate staffing for dispatch positions will be in the future. These needs can only be determined after the issues in Field Operations, 5.3,5, are addressed. Subsequent analysis and discussion will be necessary for decision making.

5.3 Operations

Our team recommends that the following actions be taken to improve organizational accountability and performance at the existing and future PSAP.

1. Improve Citizen and Client Service by Defining and Implementing a Program of Standards and Measures, and by Strengthening Accountability for Performance

Key Issues: The existing PSAPs do not maintain a set of measures to evaluate client and citizen satisfaction, assess operational excellence, determine fiscal performance and promote organizational learning and growth.

Proposed Solution: Develop a program of balanced measures to regularly evaluate, monitor and report on overall consolidated Center performance and major lines of business. Use measurement data to inform operations.

Major Action Steps. We recommend the following major actions for implementing the proposed solution to monitor, measure, evaluate and improve Center performance:

The new Director, with assistance from the current PSAP directors, should develop a formal Performance Accountability, Measurement & Improvement Program for the current PSAPs in order to gather consistent baseline data with the following components:

- Develop 'Dashboard' of key performance indicators (KPIs) at the Center, function, and individual levels.
- Introduce the application of real-time results on the status of Call handling and Dispatch operations through active supervision of these functions and of the workforce.
- Develop a formal program of quality control practices and assurance standards for evaluating both operational and supporting administrative functions.
- Conduct ongoing analysis and reporting of performance outcomes and levels, to include quarterly and retrospective reviews.
- Develop formal linkages for 'feeding' lessons learned into the design and revision of new hire preparatory training and ongoing learning programs.
- Develop a well-defined process that can be consistently applied for recognizing effective and correcting suboptimal performance.

Possible Obstacles or Barriers to Implementation. The following item is noted as it could serve to affect the success of change efforts, as recommended and outlined:

- The introduction of a well-defined program for holding employees, supervisors and leadership accountable for performance may be perceived as an attempt to provide negative feedback to the workforce. This can be mitigated by building a program where all of the Center's employees are held accountable, not line staff exclusively. If the program focuses on 'what counts' and is not perceived to be trivial, buy-in is more likely across the workforce.

- The current PSAP directors may have difficulty developing a mutually agreeable Performance Accountability, Measurement & Improvement Program for the current PSAPs. It is recommended that the development of the Program be led by the new Director, in collaboration with the current PSAP Directors.

2. Quantify, and thus Improve the Transparency of the Total 'Cost' of Center Operations to Effectively Support Informed Investment Decisions and Sound Fiscal Management

Key Issues: Total costs are not readily transparent due to the availability of multiple revenue streams that support both PSAP's operations, the existence of positions working in the Center that are not funded by the budget, and to the pool of overtime expenditures that fund staffing equivalents to supplement the Center's authorized positions. The PSAPs lack positions dedicated to handle budget responsibility, which dilutes accountability for budget projection, preparation and accounting of expenditures incurred.

Solution: Assign oversight responsibility for each Center's budget. Improve transparency of costs by structuring the budget to capture and report on all resources funding PSAP administration and operations. Actively pursue alternative sources of revenue to ensure adequate funding for operational, technology and personnel needs.

Major Action Steps. We recommend the following major actions for implementing the proposed solution to enable PSAP leadership to prepare stronger justification and supporting documentation for requests during the budget cycle:

- Develop an activity-based budget for each PSAP Center to effectively link the annual budget allocation to the attainment of defined performance objectives, and ensure the appropriate allocation of resources. Include in the budget a contingency, or reserve fund for unanticipated expenditures.
- Hire a Budget Analyst who will be charged with responsibility for researching grant opportunities and applying for grant funding, and assisting the Director with budget projection, and preparation and accounting of expenditures incurred for personnel, facilities, I.T. and other operational costs.
- Develop a phase-out plan for reducing, and potentially, eliminating overtime through staffing additions and better management of the PSAP's non-emergency and peak workloads.

Possible Obstacles or Barriers to Implementation. The following item is noted as it could serve to affect the success of change efforts, as recommended and outlined:

- As the PSAPs have not previously established an activity-based budget, sufficient performance data on outputs and outcomes are not available to support the level of granularity desired in describing the costs of various operational activities or those activities that directly or indirectly support operations. The new Director can work with current PSAP Directors and City/County budget personnel to develop the necessary measures.

3. Consolidate 9-1-1 Call Processing

One of the primary objectives of consolidating emergency communications center operations is to enable a single "universal" dispatcher to receive and process all 9-1-1 calls, regardless of the service requested. The Universal Dispatch Committee will be charged with developing and implementing the action plan to guide the reengineering of call taking and dispatching processes as described in Chapter 5.1,E, 5.

4. Reduce the Amount of Unnecessary Calls Received on the Non-Emergency Lines

In examining the 'business' of the PSAPs, our team concluded in Chapter 4.3 that core emergency communications is diluted by a sizeable non-emergency workload due to the demands placed by the "switchboard" nature of the non-emergency telephone numbers. The combined annual 9-1-1 and non-emergency line call volume is approximately 832,602. However, 9-1-1 calls represent only **20%** of all calls received at both PSAPs.

Advertising a 7 digit number as a police or sheriff "non-emergency" number characterizes it as a linkage to non-emergency law enforcement services, which is a practical use. However, most calls received on the non-emergency line do not result in the dispatch of law enforcement services. The non-emergency lines serve primarily as a switchboard for the police department and sheriff's office and a general information line for the public. The large volume of calls received on the non-emergency lines results in significant demands on expensive call taker resources and can interfere with the efficient handling of 9-1-1 calls.
Therefore, a goal of the City and County should be to reduce the number of calls received on the non-emergency lines that are not non-emergency requests for law enforcement services. There are many options ranging from no/low cost to high cost.

- On the police and sheriff web-pages update and make more prominent a link to information describing the proper use of 9-1-1 and the non-emergency lines.

- Develop a strong, on-going public education campaign utilizing radio, television, and newspapers to inform residents and visitors on the proper use of 9-1-1 and the non-emergency phone numbers. This can be done either in-house or by contracting with a public relations firm.

- Have the PSAP directors develop a presentation on the proper use of 9-1-1 that can be frequently delivered at community meetings, business and professional association meetings, elementary, middle, and high schools, and special events.

- Explore implementation of a County-wide 3-1-1 capability to handle citizen requests for information and/or government services, to include calls to the police non-emergency telephone line presently handled by the PSAPs

- Discourage employees from using the non-emergency lines unless absolutely necessary

Recently, the LCSO added a link to their home web-page providing easier access to Sheriff's Office phone numbers.

5. Determine the Future of Law Enforcement Dispatch and Field Operations

One of the primary objectives of the consolidation effort is to establish and implement a dispatch process that provides for closest unit law enforcement response to "Emergency in Progress" calls for service regardless of jurisdictional boundaries. In order to accomplish this objective, City and County Law Enforcement leadership must establish an Executive Work Group to address and resolve several primary issues such as;

1. To what extent will the parties agree to modify the current Mutual Aid Agreement to permit TPD to respond to certain calls for service within the unincorporated areas of the County if they are the closest available unit?

2. What types of "emergency in progress" calls for service will receive a closest unit response?

Once these factors are addressed and resolved, more detailed agreement on how the constraints will be applied to specific operational processes must be established. The following operational scenarios illustrate the level of detail that must be part of the planning process:

- Will off-duty TPD police officers on routine activity within the unincorporated areas of the County be made available for dispatch to "emergency in progress" calls for service

- Will the Mutual Aid Agreement be modified to permit a TPD unit that is the closest available unit within the unincorporated area of Leon County respond to "emergency in progress" calls for service, and, will the obligation for scene relinquishment, investigation and follow-up remain as currently outlined in the Mutual Aid Agreement

- If a LCSO unit dispatched to an "emergency in progress" call for service within the City limits is the first unit on the scene, will responsibility for follow-up of a City event continue to be assigned per the Mutual Aid Agreement

- If a TPD unit dispatched to an "emergency in progress" call for service within the unincorporated area of the County is the first unit on the scene, will responsibility for the follow-up of a County event continue to be assigned per the Mutual Aid Agreement

The decisions resulting from this collaborative planning process can be incorporated into the existing Mutual Aid Agreement or developed as an addendum to the Mutual Aid Agreement.

Upon finalizing the field operations protocols, the requirements for radio dispatch can then be developed.

Upon agreement on the operational aspects of multi-agency responses to "emergency in progress" calls for service, the new Director, or an independent entity, working with Law Enforcement stakeholders, must develop a business plan for the actual dispatching of closest available units to "emergency in progress" calls. Options range from maintaining the status quo of agency specific dispatchers and radio channels with modifications to support multi-agency dispatch, to establishing a universal law enforcement dispatcher capacity with new dispatch zones/areas that manage activities for both agencies on each radio channel.

6. Reconfigure Call Taker Workstations

Call taker workstations should be configured so that call takers who are actively handling 9-1-1 calls are not distracted by the audible alert that continues to sound at their workstation when other 9-1-1 calls are in queue.

The Operations Committee should consider the desirability of integrating 9-1-1 and non-emergency lines so that call takers can use one headset to answer any call. This will increase call taker efficiency, and reduce ergonomic and health risks.

7. Develop After Hour Warrant Verification Procedures

The LCSO Warrants Unit maintains all warrants/injunctions for the County. Whenever a Deputy in the field encounters a person who has an outstanding warrant/injunction in the system (NCIC/FCIC) and they develop any concern regarding the validity or contents of the warrant/injunction, the Communications Center is responsible for locating the hard copy of the warrant/injunction and verifying its authenticity and any other information that may be required.

The Warrant Unit is normally staffed from 8:00 a.m. to 5:00 p.m. Monday through Friday. Therefore, the Communications Center retains a key to the Warrants Unit for after hours warrant verification. When a warrant needs to be validated, any available Communications Center employee responds to the Warrants Unit. They locate the hard copy of the warrant/injunction, confirm that it is active and that the person wanted characteristics are the same as the person in custody. The Communications Center averages from 1-3 after hour requests for information each day.

The Duty Office in the lobby of the building is staffed by a Sheriff's Deputy 24 hours a day, 7 days a week whose purpose is to assist visitors, and provide law enforcement related services over the phone. It is recommended that responsibility for after hours warrant/injunction verification be assigned to the Duty Office Deputy when LCSO PSAP operations move to the new facility. The Operations Committee should be charged with developing a Standard Operating Procedure for this process.

8. Minimize the Use of 10-Codes on the Radio

In accordance with the National Incident Management System (NIMS), when engaged in incident response using the Incident Command System (ICS) plain language is required. The value of using 10-codes for simplicity and speed is lost when members of the response team are

unaware of their meanings, as may occur in a multi-jurisdiction / multi-agency response event. As 10-codes used in one jurisdiction, or agency, are not the same as those used in another, it is important that responders and incident managers use common terminology to prevent misunderstanding in an emergency situation. While plain English is not required for internal operations, it is encouraged over 10-codes to promote familiarity within operational procedures used in emergencies[10].

In keeping with the "spirit and intent" of HSPD-5 and HSPD 8, the Department of Homeland Security (DHS) and the NIMS Integration Center has issued an edict stating that the use of ten-codes in radio transmissions and incident operations is counterproductive to NIMS compliance. It is their desire for all public safety agencies in the US to switch into a "plain speech" mode of communications.

The Association of Public Safety Officials (APCO) Issue Paper: Plain Speech in Public Safety, Communications Document #: 12-2005-001, Approved December 3, 2005, contains recommendations concerning the use of 10-Codes by public safety agencies. Due to a number of important factors, APCO International renewed its assertion that plain speech communications over public safety radio systems is preferred over the traditional 10-Codes and dispatch signals used by a majority of law enforcement agencies across the country. It is recognized that valid concerns about officer safety or confidential information being jeopardized should be resolved between the local agency(s) and the serving public safety communications center. APCO International believes that officer safety will be enhanced through thoughtful development of plain speech alternatives to codes/signals that protect the sensitivity of confidential information.

Many agencies have eliminated the use of 10-Codes. For example, in November, 2006, the Virginia State Police banned the "10 codes" used by generations of officers to flag everything from murders to bathroom breaks by deciding on a statewide "common language protocol.[11]"

In order to standardize voice communications over the radio it is recommended that the National Incident Management System (NIMS) and Association of Professional Communication Officials (APCO) recommendations for plain language communications be adopted.

The City of Tallahassee and Leon County Sheriff, SOP#15, “800 MHz Communications System, Multi Agency Incident”, April 19, 2000, addresses the issue of radio communications in an incident involving multiple agencies. This SOP could serve as the basis for changing the existing radio communications protocols.

Because it is understood that certain situations involving first-responder safety and the confidentiality of information may necessitate the use of language coding it is recommended that the City of Tallahassee Police and Leon County Sheriff engage in discussion and agreement over the use of a minimum set of common, universal 10-Codes.

[10] FEMA NIMS Guidelines
[11] Washington Post, Monday, November 13, 2006

The Fire Department and EMS both utilize clear text and EMS utilizes only a few 10-codes. All four agencies should engage in the resolution of this matter.

By taking these steps prior to the consolidation of dispatch operations, transition to a universal dispatching environment will be simplified when the agency communication centers are migrated. Furthermore, radio communications are an officer's lifeline - officer safety will be immediately improved when law enforcement shares a common language on the radio.

9. Consolidate Existing and Develop New Standard Operating Procedures

Standard Operating Procedures (SOPs) are key to the efficient and consistent operation of any business unit, and are a prerequisite to the performance of any quality assurance evaluations of the operations of the unit or service. The development and use of an SOP promotes quality through consistency within the organization, even if there are personnel changes.

The new agency will need to develop a coordinated set of operational protocols that documents the details of specific center-wide operations and interagency procedures. Where possible, the SOPs should build on processes already underway. The intent is not to create new processes but to enhance, document, and agree upon the processes to be followed within the new emergency communications center. The four (4) sets of SOPs already in existence can serve as an excellent starting point for SOP development.

SOPs that will have significant operational impact to emergency communications center operations and are essential to successful operational transition should be identified, developed, and validated prior to migration to the new facility. SOPs of lesser operational impact and those that are not required to be implemented prior to new facility transition should, at a minimum, be identified and catalogued.

The following topics should be considered some of the primary areas for which SOPs will need to be developed:

1. Administration
2. Operations
3. Building Security
4. Information Systems
5. Facilities Management
6. Other

The SOP development could follow a process and schedule as described below.

SOP DEVELOPMENT
Phase 1: Organize the Development Team
Provide briefing to the Operations Committee on the SOP goals, objectives and processes and obtain agreement on the primary functional areas requiring SOPs
Formalize workgroup structure and finalize membership with the Operations Committee

Establish and present draft work group procedures and standardized SOP format to the Committee
Committee members identify end-user Subject Matter Expert participation and return membership rosters at next Committee meeting

SOP DEVELOPMENT
Phase 2: Gather Information and Identify Alternatives
Validate operational issues which may require SOPs
What situation(s) are the stakeholders trying to clarify?
What process should employees use for a given situation?
Is the development of an SOP the answer to these questions or should the issue be resolved in another manner?
Gather existing SOPs for review and consideration
Determine the necessity of, and develop a list illustrating the sequence of SOP development based on priority

SOP DEVELOPMENT
Phase 3: Write the SOPs
Develop/refine SOPs based on current/future operations and newly developed topics
Follow the formal approval process approved by the Operations Committee
SOP DEVELOPMENT
Phase 4: Review and Test the SOPs
Evaluate and consider such issues as: is the proposed SOP realistic, can it work in the consolidated environment, can it be readily implemented given the expected resources, will training be required, must equipment be procured, does it comply with agency policy and guidelines, how will it impact different stakeholders, will the it survive outside scrutiny?
Validate proposed SOPs with existing operational staff via facilitated focus groups

SOP DEVELOPMENT
Phase 5: Ratify and Approve the SOPs (utilizing the formal approval process developed in Phase 3).

Post SOP development tasks may include:

POST DEVELOPMENT TASKS
• **Training Needs Assessment**
Determine training needed for implementation of a new SOP
Who needs to be trained in the new or revised SOP?

What instructional content should be covered? What training methods will be most effective? Will simple roll call training with distribution and discussion of the new SOP be adequate?
How will understanding and competence be evaluated?
How long will the training sessions take? How will training be scheduled and administered?
Can training be integrated with other training or unit activities?
What records should be maintained? What reporting requirements are applicable?
Evaluation (Post Migration)
Was the new SOP fully implemented, or were there unexpected barriers to full implementation?
How did employee behaviors and actions change after introduction of the SOP?
Were the changes in behaviors and actions what were intended?
Was the purpose of the SOP accomplished?
Is the need for the SOP still current? Is the current SOP the best solution?

10. Develop Future Back-Up Capabilities

It is recommended that the City and County establish a location to serve as a backup PSAP that comprises full call taking and dispatch operation functionality. The TPD PSAP is modern, well equipped and staffed by TPD IT support staff on the day shift and should be considered by the PSCB as an available 9-1-1 backup center. It is also recommended that a portion of the operations floor be reconfigured so that it can be utilized by the TPD for other purposes while it is not in use for extended periods. Due to space and technology constraints, it would be difficult for the LCSO PSAP to support joint call taking and dispatching operations in the event of an emergency. Standardization of CAD along with the common 9-1-1 telephone system, Language Line services and universal call takers and dispatchers will facilitate ease of transition to the backup center in the event of a catastrophic failure.

11. Develop the Migration/Cutover Plan

A cutover plan will need to be developed to transfer operations to the new PSAP.
Several options, including a phased approach, should be considered. The cutover plan will be dependent on the level of training, operational, and technological integration that is achieved prior to cutover.

A detailed cutover plan with defined contingencies for failures at any step must be completed ahead of time and clearly understood by everyone involved. The actual cutover should be accomplished during hours of low activity and all personnel required to resolve any issues must be available.

No cutover should be attempted until the backup center capabilities are confirmed and tested and planning should allow for backing out of the cutover at all phases, should a failure occur. Allowing for concurrent operations and not disabling the current capability until the new center has proven itself are recommended.

In addition to the items listed prior in this report, the plan and timeline should address (but is not limited to):

- Coordination meetings
- Adequacy of funding for cutover and annual operations
- Dependencies that are external to the 9-1-1 cutover, i.e., special events in the County or government
- Construction milestones
- Evaluation of electrical redundancy and corrective action
- Public Safety Radio operational capability and interoperability, implementation and testing
- The completion of E-9-1-1 and other telephony implementation and testing; phones to current PSAPs, admin lines, ring down lines and other agencies and jurisdictions; redundancy of circuits
- Logging/Recording and alarms implementation and testing
- The completion of console and furniture installation
- Network and CAD and other systems installation
- Standard operating procedures for operations, facility, and I.T. support
- Training
- Evaluation and testing of backup site including procedures
- Very specific action required at the time of the cutover, e.g., Parallel operations, sequence, personnel, time at which actions will be completed, personnel required, parallel operation start, back-out procedures and readiness of the backup location

Additional details regarding cutover and migration are contained in Chapter 5.4.

Florida Department of Management Services E-911 Plan Requirements

The Chief Information Officer of the State Technology Office (STO) is the Director of the Statewide Emergency Telephone Number System. When a County decides to expand its 9-1-1 system, a revision of the County plan must be sent to the Florida STO for approval. The existing county plan should be modified to reflect the expansion and the changes clearly noted. In addition, a letter is required in which additional details about the expansion are identified.

The authority for requiring submission and approval of a county plan derives from the Florida Emergency Telephone Act, s. 365.171 that states:

> (9) System Approval - No emergency telephone number "9-1-1" system shall be established and no present system shall be expanded without prior approval of STO.

In order to avoid wasted money, time and effort, a draft county plan should be submitted and approved prior to the issuance of an order to the local exchange company or other providers of service and equipment. Final plan approval must be obtained prior to the system becoming operational. The STO has established a formal inspection program that includes a checklist to be used by the inspector at each PSAP. The checklist is designed to verify that each of the technical and operational standards of Section 3.4 of the State 9-1-1 Plan are satisfied. The checklist is

available on-line and can serve as a valuable resource during consolidation planning and implementation. The PSAP director and the County 9-1-1 coordinator can lead the certification effort.

5.4 Integration of Technology

5.4.1 Technical Implementation Considerations

The technical implementation of a consolidated dispatch environment involves distinct phases:

1. Implementing Motorola platform in the LCSO PSAP
2. Building a new CAD environment in new facility
3. Cutting over to new building

Executive Summary – Gap Analysis		
Current Environment	**Target Environment**	**Technical Actions and Considerations**
E9-1-1 – Two physically separate E9-1-1 systems exist.	Unified E9-1-1 environment.	Consolidation eased as both PSAPs utilize similar equipment. - Remain on CML/Plant platform in new facility.
CAD – Three separate CAD systems are in operation.	Unified COTS CAD application for fire, EMS, police, and sheriff.	The Motorola CAD system operated by the TPD is the only system that is capable of meeting the requirements of all agencies. Motorola CAD is widely used throughout the nation including nine jurisdictions within Florida. It is tightly integrated with the Motorola RMS and other modules of the Suite currently utilized by TPD and can be configured to support multi-agency, multi-discipline public safety responses. - Migrate LCSO PSAP to Motorola platform before occupying new facility to provide a "virtually" consolidated environment - Configure LCSO and TPD PSAPs as live backups to each other. - Install and test new equipment in new facility 4 to 6 months prior to cut-over
Wireless Data - City and County operate separate data networks.	Unified wireless data environment.	In the long term, separate networks will prove to be more costly and difficult to maintain. - Short term - utilize the existing wireless network controllers providing intelligent roaming capabilities - Mid-term – collect performance data on each

		network regarding coverage, reliability, effective throughput - Long term – (upon of after occupancy of new facility) - merge onto a consolidated network for mobile support after analysis of performance data
GIS – Separate GIS updates are made by personnel in each PSAP to meet operational requirements.	Unified public safety GIS/Mapping system.	City and County PSAP maps may differ pending next map refresh. - After LCSO PSAP migration, identify one edit process for all interim mapping updates for public safety applications covering both City and County geography.
Law enforcement RMS – Two separate systems exist.	Unified public safety data management and analysis capability.	Although technically feasible, operating two RMS systems off one CAD would not present an optimal data management and analysis environment. - Consolidate on Motorola law enforcement RMS and HTE field reporting

Operationally, there are many benefits to be gained from a standardized CAD/RMS platform. For example, training is standardized for all users of the system. This reduces training costs and provides for more training opportunities than would otherwise be available. Another advantage is that many individuals receive the same training and are competent users of a shared resource.

A common CAD also greatly increases flexibility when making backup and disaster recovery plans. It will allow call takers to go to the back-up center and operate as if they were at their own PSAP. Not only is there familiarity with the equipment, the CAD system could be, and should be, configured so that you are operating your own "version" of the CAD at the back-up PSAP. This means that any unique features that are on your primary system are accessible from the back-up center.

Implementing the Motorola platform within the LCSO PSAP prior to the new facility being completed will bring many of the benefits of a consolidated center to bear even before the PSAPs are merged.

From a purely technical standpoint there are two options for running the Motorola CAD platform (CAD, RMS and ancillary applications) in the LCSO PSAP:

1. Running off the existing hardware in TPD PSAP
2. Installing new hardware at LCSO PSAP

The advantage of the former is that the costs for new servers and other equipment are avoided. However, the second option would allow for each PSAP to become a fully operational, live backup to the other – a capacity that neither PSAP currently enjoys. This option also reduces the risk inherent in the cut-over to the new facility when that time arrives.

Whether or not LCSO adopts the Motorola RMS brings an additional decision process into play. Technically, two separate RMS systems could easily be fed from one CAD through separate interfaces. The Field Reporting module, which feeds the RMS to an extent, being implemented by LCSO is another application that could technically remain separate. However, from a data management and analysis standpoint it would be a less than optimal architecture. For example, separate master name, vehicle and property indexes would be maintained. In the case of field reporting again two interfaces would be required where one is the norm.

These systems, but especially the RMS, are considered a critical component of the law enforcement environment and the capability to analyze data in order to solve crimes, spot trends and deploy resources in the most effective manner.

Therefore, it is highly advisable for all law enforcement to utilize the same databases whenever possible, particularly as jurisdictional boundaries are being increasingly overlaid to improve response time. In that TPD and LCSO units will sometimes be dispatched to the same incidents in the future, the splitting of data will have a negative impact of the ability of both agencies to use incident data to better meet their missions. For example, RMS information regarding an incident within an agency's primary jurisdiction, say Agency "A", could reside in the RMS of the other agency, "B", remaining for all intents and purposes unavailable for reference and analysis by Agency "A".

Collecting information from two disparate systems would result in unnecessary complications and make technical support more difficult and costly. Differing data formats and edit routines would have a negative impact on data integrity and consistency.

As the RMS should be tightly integrated into the CAD, migrating LCSO onto the Motorola RMS is recommended. It is a widely used COTS product that will not only facilitate information sharing between TPD and LCSO but also with external entities and jurisdictions as is required more now in the post 9/11 environment.

A data warehouse incorporating the two RMS systems could be built to provide access to a combined database. This approach would complicate the technical architecture and drive up implementation costs while still providing a less than optimal solution to law enforcement personnel.

The case management module utilized by LCSO could remain in place with a new interface developed from the Motorola CAD.

Another major component of the consolidated environment will be the wireless data network. While it may be a more "elegant" solution in the longer term to have a single solution, particularly when the new facility is occupied, in the interim the City and County networks can easily co-exist. The route that data travels into and out of the system is less important than it being reliably and securely transmitted – and consistent across agencies.

In the interim both PSAPs should gather performance data on their respective networks regarding coverage, reliability and effective throughput. Upon or soon after occupancy of the new facility a decision could be made as to how to best provide a unified wireless data environment that will meet all users' needs most effectively and with maximum cost efficiency.

5.4.2 Migrating Systems at End of Life Cycle

The decision to consolidate onto a shared platform necessarily renders redundant a number of existing core systems and interfaces that are integral to the public safety IT environment currently operated at the LCSO PSAP. It is critical to retire these systems in a planned manner in order to maintain the ability of the LCSO PSAP to operate during the transition.

At the same time some LCSO PSAP systems will migrate to the new environment and become part of the operational environment while others may need to be maintained to provide access to legacy data even after the primary system itself is retired.

LCSO PSAP systems to be superseded include:

- LCSO CAD/ (Also recommended: RMS, Field Reporting)
- EMS CAD
- EMS RMS

Core CAD interfaces would need to be replicated or duplicated within the LCSO PSAP. These are standard interfaces common to CAD systems and should present no challenges. These interfaces include:

- Master time clock
- e9-1-1/ANI/ALI
- Tactical mapping
- Mobile connectivity and AVL
- Paging interface

County, state and federal query connectivity

Ancillary systems in place within the LCSO PSAP which will remain part of the operational environment will require new interfaces to be developed or configured if the vendor has previously developed an interface for the requirement. These systems include:

- ProQA
- Document Imaging
- LCSO Intranet
- Case Management

5.4.3 CAD Configuration and Migration

The CAD and RMS systems represent the linchpin of the City and County's entire public safety information systems architecture. Without these systems providing a solid foundation all other public safety initiatives which rely upon information access, analysis and sharing will be negatively impacted. It is therefore of critical importance that the consolidation process is executed and the old CAD and RMS systems are retired through a planned, coordinated process.

Modern CAD systems are developed to be highly configurable in order to address the unique processes found in PSAPs across the world. This configurability is designed to minimize the need to develop customized software. Customization increases the cost in time and money to implement the system and decreases the vendor's ability to support the product. COTS packages are more easily updated to reflect national standards and directions and all users equally benefit from product enhancements the vendor makes to the product.

Implementing the new platform within the LCSO PSAP then is primarily one of replicating the interfaces and configuring the system to the new joint PSAP Standard Operating Procedures. Depending on the level of differences in these procedures to the current ones the configuration of an LCSO PSAP "version" of the platform could be accomplished relatively easily. Once the system has been configured, tested and approved by LCSO PSAP the actual cut-over could then commence after training is completed.

The EMS module of the Motorola CAD is, of course, currently not in use. In the case of EMS that module would then have to be activated and configured. ProQA would remain and be integrated into the EMS module.

While the configuration of the system is being accomplished to address operational requirements the interfaces would be developed and installed to meet the technical requirements.

The current LCSO CAD application (including interfaces) itself is to be discarded upon cutting over to the new system. Once the new platform has been accepted and the remaining event data is transferred to the new platform the application may be dismantled. (Most jurisdictions find that with other CAD files such as Location of Interest it is more effective to revalidate and re-enter the information as opposed to performing a data conversion.) A migration plan must be developed with the vendor to guide this process.

Planning for the actual cut-over from the current LCSO CAD platform to the new one is the most critical component of the migration plan in that any difficulties encountered during this procedure can lead to the entire emergency response capability of the County being substantially impacted or rendered inactive.

Fortunately, CAD vendors and the associated entities such as the telephone company are highly experienced with the planning and execution of CAD cutovers. Lessons learned in other jurisdictions show that delaying this planning effort introduces a higher level of risk to the cut-over. Clearly, the sooner this planning begins the more one mitigates the risk inherent in swapping the County's PSAP.

There are a number of key topics to be covered in developing any cut-over strategy including:

- Dedicated cut-over project team
- Contingency planning
- Data conversion
- Interfaces

Cut-over project team. Cutting over from one 9-1-1/dispatch system to another involves a number or parties, each of whom must be engaged in the planning process from the beginning. For the cut-over team involved in the planning should minimally include:

- City and County Departments:
  - IT
  - Police
  - Sheriff
  - EMS
  - Fire
  - LCSO Division of Emergency Management

- External Parties:
  - Motorola
  - CML/Plant Equipment
  - Phone company

> ***"…a minor programming error that caused the [CAD] system to crash. The automatic changeover to the backup system was not adequately tested; thus the whole system was brought down"***
>
> *-Report of the Inquiry into the London Ambulance Service, February 1993*

Each of these entities will also need to provide technical resources for both the planning and operational aspects of the cut-over, including having those resources in attendance for the actual cut-over itself. To mitigate risk cut-overs are usually scheduled at the time when the system is least utilized, typically midnight or early morning on a slow weekday.

The cut-over team should have a formal governance structure, delineated responsibilities, assigned resources and be organizationally integrated into the current public safety IT management structure governance board and steering committee.

Contingency planning. Contingency planning is critical to identifying and managing the potential problems that may arise during a cut-over. Each potential problem should be prioritized according to its impact on operations and a method for handling each one developed. Critical events, e.g. the failure of 9-1-1 calls to cut-over to the new CAD environment would be assigned one level of criticality while those with lesser impacts, e.g., ProQA scripts failure, which would not result in the loss of 9-1-1 service, would be handled differently. Contingency plans should include the specific actions and responsible individuals for implementing various activities.

All aspects of the cut-over procedures should be addressed in the contingency plan including telephony and ANI/ALI including cell phone location data; servers, workstations, LAN, WAN, radio and MDC operations, and connectivity to county, state and federal databases.

Data Conversion. Existing data that will be needed to be maintained in the new CAD/RMS systems will require a data conversion process. While not overly complex, the differing media, file types, databases, and operating systems that support these data do introduce potential complications. Data conversion specifications will be part of the detailed program plan developed in concert with the vendor.

The LCSO records management system represents the most voluminous amount of data and most complex nature of the data conversion tasks to be accomplished. Assuming that the current RMS will be replaced by the Infotrak RMS that is closely integrated with the CAD application this data will need to be converted and transferred into the Motorola RMS. The existing ISAM data files which support the current RMS should be well documented by the vendor and should present no significant technical challenge to being translated into the new environment *Interfaces.* A number of existing interfaces, e.g. the MDC interface, will be rendered inoperable when the new CAD comes on line given that they were constructed to operate solely in the current environment. These will have to be replicated in the new environment. Specifications for these interfaces are known and should present no problems to the vendor.

A significant amount of the technical work required for either the data conversion or interfaces will utilize standard databases, programming languages and telecommunications assets the City and County already possess. City and County technical staff within IT and the public safety agencies might feasibly perform much of this work in concert with the vendor. This will help with the scheduling, reduce implementation costs and, as importantly, assure that County IT staff is familiar with the new environment. This will greatly assist in the County's efforts to support those aspects of the public safety IT environment not maintained by the vendor as well as support future initiatives in information sharing with outside entities which are expected to increase in number and scope.

5.4.4 Risk Management

It is no secret that large, complex IT projects often run into unforeseen contingencies that lead to delayed implementation, costs increases, loss of functionality or even total abandonment. One often sees in the news reports of complicated federal projects that run into trouble after investing millions of dollars (or more). CAD projects, too, by their very nature are relatively large and complex and should be considered as high risk.

When the project at hand is also one where the impact of its failure would be high, and in this case could impact the safety of the public or first responders, then a formal risk management program is indicated. Indeed, proactively managing risks to minimize their impact and quickly mitigate any impacts when they do occur is essential in this circumstance.

A risk management program for the CAD/RMS consolidation program should have both a City and County and vendor risk manager assigned as leads; follow a documented process; and report to the PSCB on a continual basis.

There are a number of risk management programs in existence that could be applied. However, the Software Engineering Institute (SEI) at Carnegie Mellon University has developed an approach that seems well matched to the CAD/RMS project. The Institute is a federally funded research and development center sponsored by the US Department of Defense – an organization that not only conducts billions of dollars worth of software development but that also is relying on that software to transform each of military services.

The focus of the SEI program can be summarized in three key steps that can be applied to any risk management effort:

- identify risks up front
- applying continuous risk assessment and management
- employ a team approach to mitigate risks.

One focus area at SEI of particular relevance is risk management in implementing COTS-based solutions as well as integrating legacy systems with new COTS-based applications.

When the level of risk rises to a level of becoming unacceptable will be a function of how much time would be lost and the amount of customization required.

Should implementation begin late or should other contingencies arise during implementation the target go-live date must be re-evaluated and either adjusted as required or re-confirmed and approved by the PSCB.

5.4.5 CAD/RMS Installation in New Facility

Facility details are discussed in Chapter 5.5 of this report. Briefly the facility should have the capability of connecting to the external 10GB backbone via diverse connections and providing 100MB to the desktop. As the system is already operational in the TPD PSAP the hardware and jack configuration required to operate it is well documented and can be installed and tested with little difficulty. Additional jacks should be available at each console for future growth and VoIP. Four to six months is generally required to complete all the tasks necessary to install and test a PSAP's technical environment.

5.4.6 CAD/RMS Cutover to New Facility

Cutting over operations to the new facility involves the same considerations discussed above for the cut-over in the LCSO PSAP. By having two PSAPs running the platform at cut-over the risks are substantially reduced should technical obstacles occur.

5.4.7 Preliminary Schedule

"…installation and activation of the CAD system was rushed to meet the grant deadline."
-Santa Clara County (San Jose) Civil Grand Jury Report, 26 Mav 2005

Analyses of failed CAD implementations experienced by Grand Rapids, MI; San Jose, CA; the London, England Ambulance Service and others all point to the presence of unrealistic and overly aggressive time periods allocated for implementation as a primary (although not sole)[12], driver for system failure. London, despite being advised that a 19 month implementation schedule was required insisted on a 12 month timetable that ended with a complete system meltdown. San Jose mistakenly thought that their grant funding would be at risk if their CAD implementation was not complete at the end of the grant period and so accelerated the process – they too suffered serious disruptions which are still being resolved a year later.

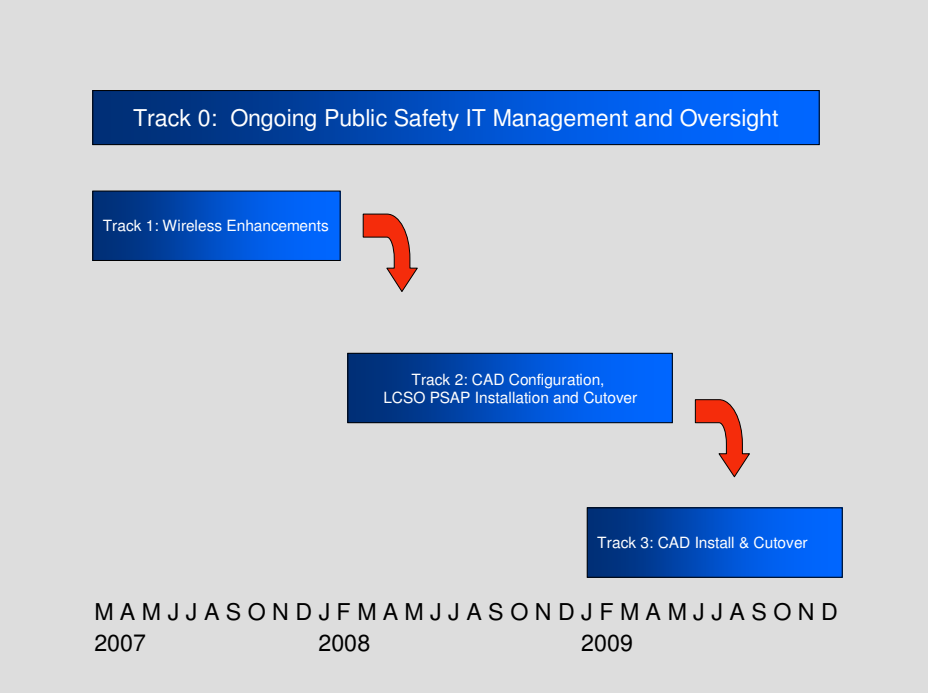
[12] Other common contributing factors include excessive customization; lack of end user involvement in requirements definition; insufficient training and poor project management.

In that the LCSO PSAP will continue to utilize the current CADs until the replacement system is fully ready there is no compelling reason to execute the cut-over until everyone is assured of the viability and completeness of the new system. Delaying the introduction of the new environment would be a much less harmful circumstance to face than a failure of the new system to perform adequately or even at all.

The development of a detailed implementation schedule will necessarily be the result of future discussions with the CAD/RMS vendor. Further, as the technical architecture is currently in the process of being enhanced on a number of fronts, e.g. new servers and expanded wireless networks, the future environment that will be in place for the migration will certainly be different than the one that is in place today. As a result, the following timetable is both high level and likely to change. Eighteen months is generally considered to be the minimum time required to implement a new CAD system - jurisdictions that have tried to accelerate that timetable have often run into significant difficulties. In the current environment however that schedule could be compressed to a 12 month process to introduce the CAD into the LCSO PSAP given that much of the core solution is already in place. This timetable would begin after the process flow is finalized and all decisions are made as to the makeup of the desired end state.

Regardless of the actual timing, it is important to stagger activities over the next three years. This allows the budgetary and workload impacts to be spread out and permits later steps in the process to take advantage of progress made in earlier steps. Activities can be divided into four tracks:

- Track 0: Public Safety IT Management
- Track 1: Wireless Enhancements
- Track 2: CAD Configuration
- Track 3: CAD Installation and Cutover



Track 0, Public Safety IT Management. The ongoing active management and oversight of the cross-agency public safety IT management structure is a critical success factor moving ahead. There will be an unprecedented amount of IT-related initiatives in the next three years, much of which will impact all agencies. These initiatives must be closely coordinated. Track 0 activities represent the overarching management umbrella to the entire public safety IT environment. Staff from City IT, County IT, and the public safety IT agencies must work together to achieve a consolidated architecture to support the PSCB's vision and direction.

Track 1. Wireless Infrastructure. Both PSAPs are currently upgrading their wireless environments through the use of commercial air cards, WiFi and intelligent roaming. A number of side benefits will accrue from this work by significantly expanding the functionality of the MDCs as they will be able to access all the functionality of any desktop PC on the network. The end state of this infrastructure will influence the configuration process.

Track 2. CAD Configuration. This includes configuring the CAD for joint law enforcement and EMS purposes as well as the development and installation of all required interfaces at the LCSO PSAP. The time required to complete this task is dependent on the degree to which the new PSAP procedures differ to those that the system is already configured to accommodate.

Track 3. CAD Installation and Cutover in New Facility. The activities in Track 3 will essentially replicate the environments in each PSAP on one platform to support a consolidated PSAP operation. In that 4-6 months are required to install and test the equipment having access to the building after the basic IT infrastructure is installed but prior to it being occupied will minimize the potential of the facility being ready for occupancy but not operations.

5.4.8 Costs

In that the costs to be incurred are subject to a number of factors that are as yet unknown it is not possible to estimate with a high degree of confidence all of the expected costs for the new IT environment.

For example, based on the existing inventory the current system at TPD represents an investment of over $3.3 million. A complete replication of this environment is probably not necessary at the LCSO PSAP but the degree at which costs could be avoided depends on the exact hardware environment is deemed necessary. For example, would a fully redundant CAD capability be required locally or would it be acceptable for the TPD environment act in this role? Either route is feasible from a technical standpoint.

Aside from hardware, additional costs would be incurred to procure additional licenses for the various applications that compose the platform. Costs for the vendor to configure the system(s) and develop interfaces as well as data conversion would also be entailed. Until the functional and operational requirements of the consolidated dispatch process are known in detail the level of effort required to configure the system can not be precisely determined. Where available, estimated costs for the components described in this section are outlined in Chapter 5.6.

5.4.9 Telephony

EMBARQ is the local exchange carrier in Leon County. In meetings between the Leon County 9-1-1 Systems Manager and AK Associates it has been determined that EMBARQ can provide sufficient trunking to support either of the two locations that are currently under consideration for the new emergency communications facility. AK Associates has requested preliminary pricing for the two sites from EMBARQ. Based on discussions with AK Associates, we recommend that the number of trunks to the new facility should not be less than the current configuration. Some cost savings may be achieved when the 9-1-1 trunks are routed to a centralized location. The current CML switches are expandable to include an ACD if desired. The placement of a PBX at the new facility to handle administrative lines is pending a decision by the City and County.

When the new 9-1-1 system was implemented the City and County stakeholders chose not to put their non-emergency lines on the 9-1-1 equipment, which is why call takers use two different handsets at their consoles and cannot use one headset for both lines. The reasoning was that there might be an increased risk of accidentally disconnecting a 9-1-1 call when switching from a non-emergency call to a 9-1-1 call on a consolidated console. The new Director, 9-1-1 Program Manager, and existing PSAP leadership should reconsider this issue during new system design.

As AK Associates provides full time support for the 9-1-1 system there will be labor charges to have them pre-wire the new building for the system, however we assume these will be incurred through the current contract. The 9-1-1 Program Manager will replace the 9-1-1 logging and recording system. Our assumption is that AK Associates will maintain under the current contract. The County will purchase a system that is large enough to accommodate all 9-1-1 lines at the new Center. The County 9-1-1 Program Manager has determined the requirements for the new system. We assume that the County and City will need to contribute funds to obtain additional capacity to record radio transmissions and any other lines they may want recorded (i.e., non-emergency lines).

We recommend diverse routing of the 9-1-1 trunks and other phone lines such as analog phone sets at each call taking positions to provide diversity of telecommunications. The phone lines should enter the building at diverse locations and have separate demarcation points. At a minimum the second routing into the building should include all 9-1-1 trunks. A redundant and diverse feed (ideally not from the same central office) will guard against instances of service disruptions.

In regards to Computer Telephony Integration (CTI) we recommend that the existing system be transferred to the new facility. In addition, for the MIS capabilities, we recommend that those MIS systems for CTI and the E-9-1-1 telephone system should be included in the new design.

We recommend that the telephone system design reflect the accurate number of required ring-down phones required for the new facility based on each agencies needs. The system design must ensure the appropriate number of administrative lines are included.

Florida Emergency Telephone Number Act

Passage of the Florida Emergency Telephone Number Act, s. 365.171, Florida Statutes, in 1974 mandated that the State Technology Office (STO) develop a statewide plan for implementing the Emergency Telephone Number 9-1-1. The legislative intent of the State of Florida 9-1-1 Emergency Telephone Number Plan is to establish and implement a cohesive statewide emergency telephone number "9-1-1" plan which will provide citizens with rapid direct access to public safety agencies by dialing the telephone number "9-1-1" with the objective of reducing the response time to situations requiring law enforcement, fire, medical, rescue, and other emergency services.

The STO plan, Section 3.4.1.1 states:

> "A minimum number of incoming 9-1-1 lines shall be provided between the service provider's central office(s) and the 9-1-1 PSAP to supply a P.01 grade of service or better (one busy in 100 attempts during the average busy hour). For wireline 9-1-1 calls there shall be a minimum of two lines from each central office."

The 9-1-1 Program Manager will need to work with EMBARQ to ensure this requirement is met at the new facility. We recommend 99.999 availability of the entire 9-1-1 telephone system be included in the contract for new services.

The existing ECS switch is expandable and will support Tallahassee's requirements for additional 9-1-1 trunks and additional call taker positions. It has an ACD-like feature but does not support Network ACD between the two sites. As we understand the design of the proposed telephone system, the requirement for an ACD will not be an issue. The two ECS1000's can be linked together for failover if that option is required, but will need to be configured to support that functionality.

With respect to the Master Clock we recommend that a single system be procured and implemented at the new facility. In addition, all vendors should be informed so that they can interface the Master Clock application with their systems.

9-1-1 System Program Office

The 9-1-1 Program Office is currently overseen by the Leon County Sheriff, Division of Emergency Management. As the provision of 9-1-1 services is a core function of PSAP operations, we recommend that 9-1-1 Program Office responsibilities and staff be transferred to the new Agency after it has been established and stabilized.

5.4.10 Radio System

The existing Centracom consoles are approaching the end of their useable life. The Centracom series console will enjoy full vendor support only until 2010, after which time support will begin to wane, adversely affecting future reliability. This is not to say that after this date there will be no support but certainly availability of hardware and/or software will begin to be problematic and will worsen with the passage of time.

The current Motorola Smartnet-II radio system is in need of an upgrade if it is to continue to serve past the end of next year. The issue is that the current controller for the Smartnet-II trunked radio system will no longer be supported by Motorola after the end of 2008. The controller can be upgraded to allow continued function of the existing analog system for many more years. This makes possible the first option shown in the bulleted list below.

The current PSCB is exploring numerous options for the upgrade of its existing radio system. The following are options that are under consideration:

- Maintain, but upgrade and add additional sites for coverage, the existing analog trunked radio system
- Upgrade the entire system to an APCO P-25 compliant system
- Upgrade to a system that is compliant with the Florida State Wide Law Enforcement Radio System (SLERS)

The first option would have little or no impact on the existing radio system. The existing consoles would continue to be used in the system without need for any upgrades or enhancements.

The second option to upgrade the entire system to an APCO-25 compliant system would likely require the replacement of all consoles. If Motorola is the selected vendor then the existing Centracom Gold Elite Consoles may possibly be interfaced to the new radio system via Motorola's Gold Elite Gateway (MGEG) which allows Centracom Gold Elite consoles to access and control a packet switched based wide-area trunking system. This compatibility would have to be verified by Motorola since compatibility would be based on numerous technical issues which at this time are not known. If the vendor chosen is other than Motorola then all the consoles would necessarily have to be replaced so that they are compatible and compliant with the chosen vendor's radio system.

The third option would require the purchase of a M/A Com Pro Voice EDACS system and thus would require an entirely new console system that would be compliant with M/A Com requirements.

The current options, with the exception of maintaining the existing system, will probably require a new console. The only exception would be if Motorola is selected as the vendor for the APCO P-25 system and the existing Centracom console is modifiable via the MGEG to meet the requirements of the new APCO P-25 system. Even if this is a viable option it may not be desirable. The age of the existing console, the length of time that the existing console will continue to be supported by the vendor, the cost of modifications and loss of functionality by not upgrading the console would all weigh heavily on the decision to maintain the current console.

Based on the fact that the PSCB has not made a decision on which upgrade path they will follow, it is not possible to offer a more detailed analysis of the options available. Once a decision is made regarding the upgrade to the radio system then a more definitive plan can be offered for the various options regarding a console, backups, costs, etc.

Another issue that is impacted by the selection of a new and/or upgraded radio system is that of interoperability. Depending upon the solution selected, interoperability will be impacted for both the City of Tallahassee and Leon County users as well as other users of the system such as Florida State University Police Department and Florida A&M University Police Department, the United States Marshalls and others.

If the existing Smartnet analog system is maintained and upgraded so as to extend its useful life then there is little or no impact on the existing interoperability. However, if the decision is to upgrade to a Motorola APCO P-25 solution then the impact is considerable. The City of Tallahassee users and Leon County users will still enjoy the same level of interoperability amongst each other since all users will be equipped with the appropriate portable and/or mobile radios. This change will mostly affect the Florida State University Police Department and Florida A&M University Police Department users. Both FSU and FAMU will have to replace their portable and/or mobile radios in order to maintain the existing direct interoperability with the City of Tallahassee and Leon County that they now enjoy. More importantly since their communications are currently conducted totally on the existing City of Tallahassee/Leon County system, they will have to replace their portable and/or mobile radios to maintain their own primary means of communications. At a minimum the following are approximate costs for the upgraded radios required:

Agency	Number of Units	Cost per Unit	Extended Cost
FAMU	55	$5,000.00	$275,000.00
FSU	65	$5,000.00	$325,000.00
TCC	22	$5,000.00	$110,000.00
USMS & others	30	$5,000.00	$150,000.00

There are other upgrades that will probably be required for those agencies with a console. This cost will be in the tens of thousands of dollars but without further information cannot be estimated any better.

Those users mentioned above may purchase the required APCO P-25 portable and/or mobile radios to migrate over to the new system and those costs are the same as in the table above. They may also stay on the analog Smartnet-II system so as to be able to use their existing portable and mobile radios. This presents a problem for direct interoperability between those outside agencies and the City and County users on the digital system. One solution is to permanently cross patch one or more talkgroups on the two systems. This is inefficient since it uses two radio frequencies to create a single talk path. Of course this patch could be enabled on an as needed basis but this is very inefficient operationally and is not desirable. The Florida Interoperability Network (FIN) could also be used but again, this is inefficient. Lastly, interoperability could be maintained by having simplex, analog, unit to unit channels programmed into all users' radios so that radio to radio communications on scene are maintained. Any option other than fully participating on the new APOC P-25 system is a less than desirable solution.

If the decision is to upgrade the entire system to another vendors system other than Motorola's, whether that new system is APCO P-25 compliant or the proprietary system of another vendor,

this will require replacing all the portable and/or mobile radios at a cost similar to that shown in the table above and will also require new consoles for those users that currently have them.

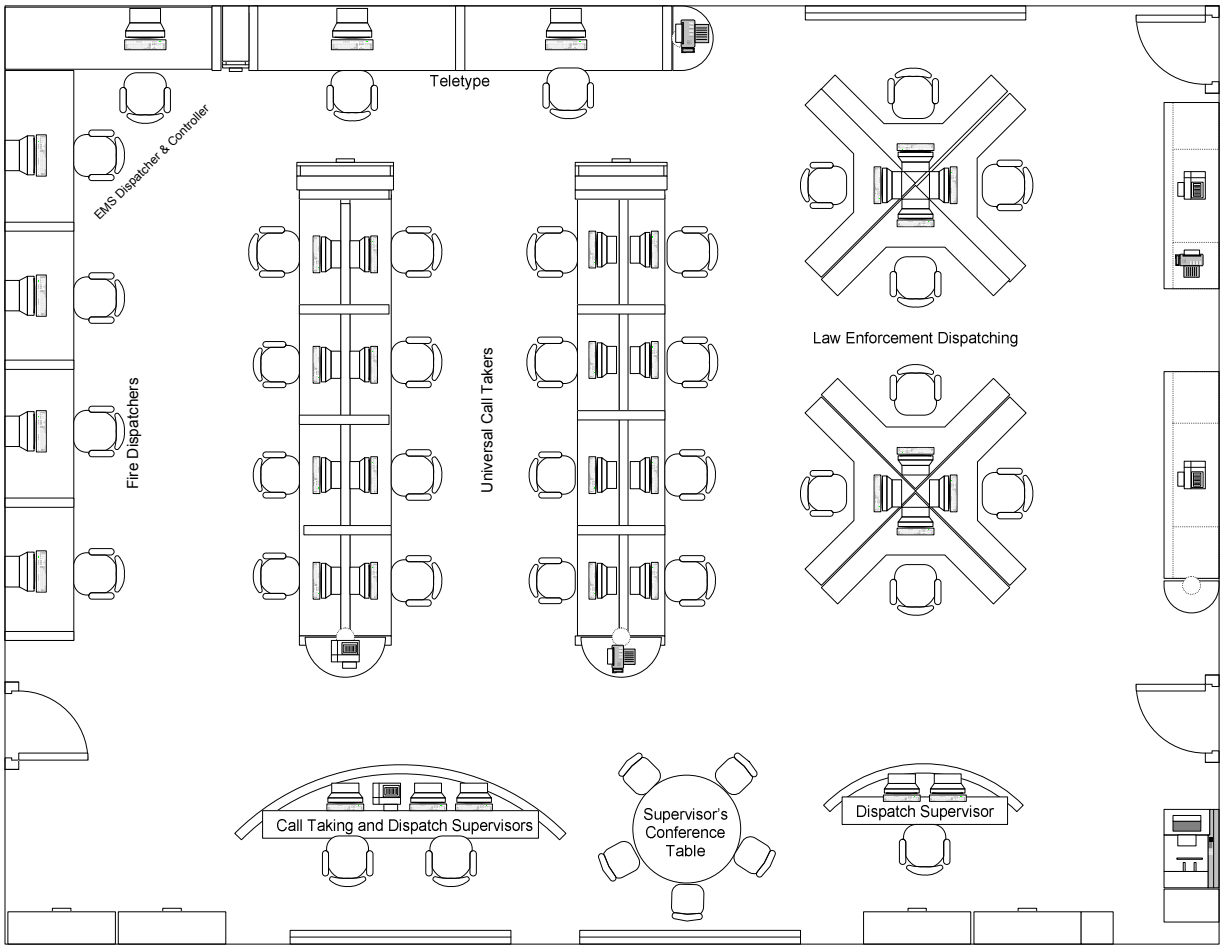
There are also some other interoperability systems that will not be affected by the change or will be impacted only slightly. For instance, the NPSPAC I-Call and I-Tac channels that are currently in use will not be impacted by the new system. The NPSPAC channels all operate using analog FM, which can be thought of as the lowest common denominator in public safety land mobile radio systems. All manufacturers' portable and mobile radios offer analog FM modulation. The Motobridge will be impacted only slightly since only the interface between the new equipment purchased and the Motobridge will have to be upgraded.

Once a decision is made with regard to the future path of the radio upgrades then a more detailed analysis along with cost analysis can be made.

5.5 Facility Requirements

As required by our scope of work we have developed general recommendations for equipment and communications center facility requirements including a space needs assessment for square footage, personnel, office space, etc. Additionally, based on our understanding of the call volumes, dispatch runs, and other factors specific to the County and City dispatch operations and protocols, we have prepared an operations floor layout based on the required number and types of consoles and technology configurations. We have also proposed actions in other personnel areas as required.

Based on projected peak call volume and staff deployment developed in the personnel section, the new Center requires 15 call taker positions, 13 public safety dispatcher positions, plus 3 supervisor positions. In addition, the Center will require two teletype positions. The below conceptual operations floor layout takes into account the necessary number of positions but is not drawn to scale.



We propose that the following additional personnel support areas be considered in the design of the new emergency communications center facility.

Personnel Related Support Areas to Consider	
Director's Office Suite	4 = Director, Deputy Director, Budget/Procurement, Administrative Support, and small room for mail and package delivery
Shift Supervisor Offices (non-dedicated)	4 offices = glass windows to overlook operations floor
Training Coordinator Suite (includes QA)	Shared room for 5 employees
Uniformed Public Safety Liaison Offices (Police, Fire Sheriff, EMS)	Individual offices for 4 employees
System Administrator's Office (CAD, RMS, GIS, 9-1-1, Radio, 1 extra)	Individual offices in a shared suite for 6 employees
911 Program Management Office	Office Suite for 4 employees

Training Room	To be located adjacent to operations floor containing 8 CAD terminals and 2 Radio consoles that can be utilized for 1) training, and 2) overflow calls during a critical incident
Kitchen/Dining Area - Break Room	Fully equipped kitchen with pantry and storage for emergency provisions connected to a dining area with television, internet computer workstation, and telephone.
Outside Break area	Adjacent, secure, outside break area with picnic table, benches, and separate smoking area. Located away from public view
Quiet Room	Small room with chair, couch, television, bathroom, phone, table, lamp that can accommodate 3 people
Exercise Room	To accommodate 8 pieces of equipment,
Locker Rooms	Mens/womens, preferably accessible to the exercise room with half lockers in each, and access to a changing room and shower facilities. 120 half lockers in central location near operations floor or kitchen minimum required
Roll Call/Multi-Purpose/PIO room	Outfitted with backdrop, podium, agency logo, and supplemental electrical feeds to support media briefings with sliding room divider so it can be arranged into 2 rooms
Meeting/Mini-EOC Room	Requirement TBD
Multi-Purpose/Emergency Bunk Rooms	With storage for folding cots and sliding room divider so it can be arranged into 2 rooms (male and female)
Storage Rooms (for most office areas and general storage for extra furniture, emergency supplies, etc.)	As needed in hallways and offices based on total space
Multi-Use Contractor Office Suite	Shared room for 6 contractors
Reproduction Room	Central photo-copy functionality for all PSAP needs
File Room	To store shift supervisor, investigative, administrative and operational reports
Security Office at Lobby Entrance (access control systems and cameras)	Security Station
Lobby/Waiting Area	Access Controlled
Specialized Unit/Supplemental Office Suite to accommodate growth	Office suite for 4 employees
Employee and Visitor Parking	Separate employee and visitor parking spaces including dedicated media parking area (Communications Center requirements only, not including possible EOC component).

Loading Dock	Area to receive equipment/packages, etc.

Proposed Operations Floor and Staff Support Facility Sizing

One of the biggest challenges in putting together a budget for a new data center quality building is determining what it is going to cost to build out the raised floor area. Core and shell costs as well as the cost of office space can be estimated, but the cost of the computer room square footage and all of the support areas are subject to a large number of variables. Those variables include the levels of redundancy and reliability required, the electrical and mechanical capacities, the configuration of the electrical distribution system, levels of security and the level of energy efficiency the systems are designed for. All of these variables can have a significant impact on the cost of designing and building a modern data center[13].

As required, we conducted a space needs assessment for square footage for the Operations Floor, and Staff Offices only, and not for the entire facility. We have calculated approximate square foot needs based on our assessment of Operations Floor and Staff Office requirements (Chapter 5.6). The information utilized to develop our sizing and cost assumptions for the Operations Floor and Staff Offices are found in Appendix 7.1.

This facility estimate does not include any technology. Additionally, space requirements for the other support areas (kitchen, training rooms, locker rooms, etc.) and all other infrastructure requirements and costs (Generators, Cabling, Network, Security, HVAC, etc.) noted in Appendix 7.1 must be determined through a programming effort by the Architectural-Engineering firm contracted to design the building.

Based on our knowledge and experience and taking into account construction costs for the Leon County area, we estimate construction costs for the new facility to range from approximately $600.00 to $800.00 per square foot for a data center quality building.

We estimate the Operations Floor and Staff Offices will require approximately 9,107 square feet of space, resulting in an estimated cost of between $5,464,200 and $7,285,600.

Facility power

Accurately assessing power load requirements for the building design, to include redundant power needs is essential to the future operation of the new facility. The National Emergency Number Association (NENA) has published a number of documents to assist in establishing minimum standards for PSAP's in many areas. The NENA document titled, "NENA Recommended Generic Standards for E-9-1-1 PSAP Equipment" addresses AC power in Section 6.2 which reads, in part:

> "In certain situations, there may be prolonged power outages that exceed the back-up time for the UPS at the PSAP. To satisfy prudent contingency planning procedures, it is recommended that the PSAP be equipped with a source for long-term emergency power.

[13] Estimating the Construction Cost of a New Data Center, Ron Hughes, March, 2005

This power source may consist of a ***redundant utility power feed*** or a generator sized appropriately to pick up the PSAP's critical loads as detailed previously in section 6.2."

In addition, the National Fire Protection Association (NFPA) 1221, Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems, 1999 edition, chapter 2, Section 7.1 requires two sources of power.

Having reliable, redundant, and if possible, diverse sources of power is critical for a 9-1-1 center. It is recommended that there be redundant and diverse routing for power to the building. A redundant and diverse feed will guard against instances of a cable being cut by a construction mishap or other failure. It also provides backup in the event of natural disaster such as downed power lines caused by a hurricane, and other natural or man-made events.

The same reliability and redundancy requirements would apply for HVAC and plumbing systems.

Facility Power Design Options		
Power Requirement	**Design Option**	**Benefits**
County Sheriff, City of Tallahassee plus growth factors	N-or required need	Meet minimum requirements for operations. For example, N would provide for 1 generator of the equivalent or greater load
County Sheriff, City of Tallahassee plus growth factors	N+1 need plus additional component for redundancy	Meets minimum requirements for operations, For example, N+1 would provide for 1 additional generator of the equivalent or greater load requirement
County Sheriff, City of Tallahassee plus growth factors	N+2—Base need plus two components for redundancy	Offers an additional level of redundancy beyond N+1
County Sheriff, City of Tallahassee plus growth factors	2N—two separate systems, each capable of providing the N base requirement	Offers an additional level of redundancy beyond N+2

We recommend at a minimum, an N+1 configuration.

Upon reviewing the Joint Dispatch Site Evaluation Matrix distributed by the Leon County, Construction Manager, on January 25, 2007, we identified the below additional considerations that should be evaluated to ensure accurate site sizing.

1. Facility Survivability Level

Overall Design: This facility should be designed to withstand/mitigate the effects of a major disaster, such as a Category 5 hurricane, flood, earthquake, or bomb blast.

Bomb Blast Mitigation: To address a stationary exterior vehicle bomb, design for a specific poundage of TNT in combination with a building stand off distance. For instance New York City, PSAP plans for one thousand (1,000) lbs. of TNT (minimum) at a standoff distance of one hundred feet (100') from the building façade.

Package delivery/receipt: To address medium and large size packages in which the aggressor conceals bombs or other hazardous materials and delivers them to supply and material handling points such as the loading dock or a separate mail handling point should be considered. In each case the facility design should accommodate the potential force of an explosion such as design one hundred (100) lbs. of TNT.

Loading Dock: Consider designing the loading dock as external to the primary PSAP building in order to mitigate the affect of any bomb blast from a vehicle at the loading dock.

2. Building Footprint

Stacking Diagram: Consider what functions will need to be on what floor, or adjacent to each other in the floor plan. Consider the total square footage of the building footprint which is based on the operations to be performed in the building (9-1-1 and possibly the EOC and TATMS), space needs for the operations floor, other personnel areas, internal security and circulation requirements, etc.

3. Exterior Facility Areas

Parking: Need to consider the number of parking spaces for both employee and visitor parking areas, employee/visitor access and entrances. Also, consider additional parking to accommodate for surge requirements for staffing the EOC during activation.

Internal site road system: In addition, the internal roads into and around the site will add more acreage requirements for instance for delivery trucks to the loading dock area.

Radio: Radio tower placement adjacent to the facility will need to be considered, requiring additional space as well as conduit to the PSAP. The area around tower will need to be protected as well.

Generators: Consider placing the emergency generator and utility systems away from high threat areas such as loading docks, entrances, and parking and these areas should be protected.

Security access point: Consider designing the site to include a separate security access point for the facility. All parkers and delivery trucks will need to pass by/through this building which is outside the 100 foot standoff distance from PSAP.

Facility Maintenance

The new Agency will need to contract with the City or County Facilities Management Division (FMD) to provide a full range of facility management services to the new facility. Depending on whether or not an EOC is incorporated into the new facility, consideration should be given to establishing an on-site Operations and Maintenance (O&M) satellite office/shop with staff dedicated to the facility. FMD services should include in-house preventive maintenance services, response to routine and emergency service calls, and perform minor repair and alteration to the facility. FMD may also conduct maintenance, repair and minor renovations to all building components to include furniture, fire extinguishers, all door hardware, and interior and exterior painting.

On-Call employees should be available for swift response to after-hour emergencies. FMD should also maintain, service, and inspect all mission critical facility systems such as HVAC, Plumbing, Fire Alarm/Fire Suppression, and Emergency Generators. A Maintenance and Support Plan should be developed that describes in detail FMDs plan to service the facility utilizing both FMD and contractor support services and detail those facility and equipment services which are provided by other City/County Government Divisions.

An important FMD goal should be to provide a safe and healthy work environment for facility occupants while ensuring compliance with Federal and State occupational, safety and health regulations to keep the facility in compliance with all current regulations.

In some agencies, the FMD oversees the general security of the facility to include the security officers, access control system, employee identification badges, CCTV, the maintenance of all security equipment, including issuing, tracking, and controlling issued keys and installing and repairing key and lock sets.

5.6 Financial Needs

We recommend that the City and County Commissioners agree to fund the new agency and facility. By having its own source of revenue source the consolidation effort will not have to compete with other services funded through general property taxes.

Upon receiving and consolidating all available budgetary information from the City and County, we were unable to determine the total cost of current operations. Revenue streams supporting various PSAP elements are sourced from different departments of both agencies, and various City and County offices provide PSAP support that cannot be reasonably estimated (human services, I.T. support, etc.).

Consolidating the budgets supporting communications center operations of the Leon County Sheriff and the City of Tallahassee Police Departments will need to be coordinated by the recommended Budget Committee. Each organization has identified current operating costs and

revenue funds supporting the communications services. The costs associated with developing a new budget and establishing supporting fund line items is negligible since both budgets are pre-existing. However, care should be exercised by the Budget Committee to insure all operating, personnel, administrative, system, and procurement costs are accounted for when reassigning the information to a new budget.

Some potential duplication was identified in areas such as furnishings and office machinery for example, as the current budgets address separate operations. The Budget Committee should consider the long term growth projected in this plan in addition to areas identified by County and City officials. Efforts to minimize costs must be carefully considered so as not to impair the effectiveness of the new organization to properly provide services to the Public Safety organizations and the public.

Current Budgets

The budgetary information supplied to our team addressed areas of Personnel, Facility, Technology, 9-1-1 Services, and Administrative operations. A number of the budget items are combined with overall organizational costs and are difficult to fully disaggregate. The significance of the current existing budgets is to provide a guidance tool to the PSCB, County and City Leadership, and the Budget Committee for development of the new budget.

Facility expenses for infrastructure were not extractable for identification to each respective communications center. The infrastructure costs are electric power, facility maintenance, HVAC, water, sewage, and janitorial services. All salary entries in Appendix 7.2 include expenses for individual taxes (FICA, Social Security, Medicare), budgeted overtime, contributions to benefit programs, pension programs, and salary enhancements. The TPD budget costs were not provided in Operating and Capital costs, and the LCSO budget costs did not provide Capital costs.

Financial Needs for the Consolidated Emergency Communications Center

This report provides various operational and technical options whose final resolution is unknown. Therefore, we cannot project costs for a fully developed communications center. However, we have projected estimated costs associated with significant components of the new PSAP in such areas as personnel, hardware, system development, office furnishings, and other integral components.

As noted in Chapter 5.5, space requirements for all staff support areas (kitchen, training rooms, locker rooms, etc.) and all other infrastructure requirements and costs (Generators, Cabling, Network, Security, HVAC, etc.) noted in Appendix 7.1 must be determined through a programming effort by the Architectural-Engineering firm contracted to design the building and are not included in our estimated facility budget.

The estimated total costs for consolidated emergency communications center operations for the detailed areas are as follows (Appendix 7.2):

On-Going Costs:	
Item	**Estimated Costs**
Annual Personnel Costs:	$6,521,472
Consolidated PSAP Software and Related Costs	$347,216
Other Costs (Appendix 7.2)	$700,992
Facility Maintenance	To be determined based on sourcing and facility configuration
Subtotal:	$7,569,680
One-Time Costs:	
Items	**Estimated Costs**
Consolidated PSAP Hardware, Software, and Furnishings Costs	**$**4,364,731 to $5,190,731
Facility Operations Floor and Staff Offices	$5,464,200 to $7,285,600
Subtotal:	$9,828,931 to $12,476,331
Costs to be Determined:	
Facility and Infrastructure Cost Estimates	To be determined by the Architectural-Engineering firm contracted to design the building (Appendix 7.2)
Remaining Technology Costs (video, wireless network, etc.)	To be determined by Project Steering Committee

The application licensing costs for providing the LCSO with the full suite of Motorola applications (Appendix 7.3, 7.4, 7.5) were based on the below recommendations.

Estimated Number of CAD Terminals Necessary Prior to New Facility Cutover		
Agency	**Existing Full Function TPD PSAP CAD Positions**	**Distribution**
TPD	18	6: Primary Call Taking 1: Supervisor 2: Fire Dispatch 7: Training Room/Mini-EOC 2: Training Room
Agency	**Existing Full Function LCSO PSAP CAD Positions**	**Distribution**
LCSO	8	6: Primary Call Taking 2: EMS ***Add 3 additional full terminals for training***

The new PSAP will require a total of 30 full function CAD positions as follows:

- 16 call taker positions (provides one additional position for design purposes and growth)
- 2 Supervisor positions
- 2 Fire Dispatch positions
- 2 EMS Dispatch positions
- 8 Training positions

This requirement results in the need for 12 additional full function CAD terminals at the new PSAP (estimated costs are detailed in Appendix 7.2)

Supplemental Funding
Earlier in this chapter, we recommended the hiring of a PSAP Budget Analyst. Typically, the function of sourcing (i.e., locating, tracking and responding to requests for proposals to qualify for grant funding) is performed by a Budget or Management Analyst, or comparable function. Grant funding in the public safety communications industry includes from both private attempts (e.g., National Emergency Number Association NG9-1-1 committee proposals) and public sources of funds such as state and federal homeland security grants.

Grant funding can be particularly effective in assisting the PSAPs in addressing weak points in its operations that traditionally have not received adequate funding in prior budget cycles. For example, the current PSAPs, may benefit from grant funds to purchase additional redundancy and/or interoperability for its wireless systems or produce citizen education and awareness materials, including videos, brochures, handouts, and other outreach or promotional publications to communicate with City and County citizens on the proper use of 9-1-1 and the law enforcement non-emergency lines.

New funding models are under development by the Next Generation 9-1-1 consortium.[14] Assessing fixed monthly surcharges on calling services (wireline, wireless, and VOIP) is the current model.[15] An alternative solution may be to assess a flat fee equal to a fixed percentage of each telephone bill.

6.0 IMPLEMENTATION PLAN AND SCHEDULE

6.1 Schedule

The timeline for the integration of technology is described in Chapter 5.4 of this report. Assuming that the new facility is complete and available within 36 months, the following high level consolidation program schedule has been developed (next page)

[14] NG Partner Program, "Funding into the Next Generation", March 2007
[15] A list of current surcharge levels for wireless and wireline services in all 50 states and the District of Columbia is available at http://www.nena.org/media/files/9-1-1User Fees_2.PDF

DRAFT CONSOLIDATION PROGRAM SCHEDULE																		
PROJECT DURATION (BI-MONTHLY)																		
TASK DESCRIPTION/PHASE	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**22**	**24**	**26**	**28**	**30**	**32**	**34**	**36**
Site Selection Evaluation																		
Building Design																		
Building Construction																		
Building Fit Out																		
New Agency Development: Personnel, Operations, Budget																		
Acquire Term Employee Support Staff																		
Universal Call Taker SOP Development																		
Joint Law Enforcement Dispatch SOP Development																		
CAD: Unified Call Taker Functional Requirements Development and Validation																		
CAD: Joint Law Enforcement Dispatch Requirements Development and Validation																		
CAD: LCSO "As-Is" Process Flow Development																		
CAD: Gap Analysis of LCSO Process Flow																		
CAD: Independent Verification and Validation of LCSO Gap Analysis																		
CAD: Universal Call Taking Project Planning																		
CAD: Joint Law Enforcement Dispatch Project Planning, System Development, Testing																		
CAD: LCSO and TPD Unified Call Taking and ProQA Training																		
LCSO RMS Requirements Development and Validation																		
LCSO RMS System Development, Testing, Training																		
Other Technology Planning: Telephony, Radio, Logging and Recording, Network																		
Development of Administrative, Operational, Personnel, and Facility SOPs for the Consolidated Operations																		
Decision on Back-Up PSAP																		
Prepare Migration Plan for Operations and Technology																		
Develop Cutover Plan for Operations and Technology																		

6.2 Steps that Can be Taken by the PSCB Prior to Consolidation to Enable a More Efficient Communications Environment

While consolidation will not occur immediately, there are things that can be done that will not only ease the way for consolidation, but will also provide some tangible benefits in the shorter term. These initiatives are listed in the below implementation plan.

Recommendations	Responsibility	Start Date
Governance and Organization		
5.1, A: Introduce a Governance and Oversight Structure for the Consolidation Project	PSCB, Director	Upon hire of Director
5.1, Stage 1: Hire a Civilian Director to Lead the DPSC	PSCB, TSC	Immediately
5.1, B: Establish the DPSC as an Independent Agency	PSCB, Director	Upon hire of Director
5.1, C: Establish an Organizational Transformation Plan	PSCB, Director	Upon hire of Director
5.1, D: Set the Guiding Vision for New Organization and Center and Establish the Client User Group	PSCB, Director	Upon hire of Director
5.1, E: Establish the Committees Necessary to Develop the Organizational and Operational Structures, Processes and Plans for the New Center	PSCB, Director	Upon hire of Director
5.1, E: Hire Term Employee Support Staff	PSCB, Director	Upon hire of Director
Personnel and Staffing		
5.2: Implement 2007 Call Taker staffing recommendations to reduce call answering times and abandon rates	Current PSAP management	Immediately
5.2, 2: Begin training all employees designated as primary call takers on EMD protocols	Director, PSAP Management	Upon hire of Director
5.2, 3: Establish a Personnel Committee to develop the personnel transition plan, salary alignment, and benefit packages	PSCB, Director	Immediately
5.2, 4: Develop a consolidated training plan, analyzing current existing training, reducing duplication, and establishing a transition plan to meet the communication center's requirements.	Director, PSAP Management	Upon hire of Director

5.2, 5: Establish a Standard Operating Procedure specifying the operational and certification level requirements of the communications organization.	PSCB, Director, PSAP Management	Upon hire of Director
5.2, 6: Develop an organizational structure for staffing, supervision, and internal communications protocols	Director, PSAP Management	Upon hire of Director
5.2,7: Establish a consolidated recruitment program and retention program	Director, PSAP Management	Upon hire of Director
Operations		
5.2, 1: Improve Citizen and Client Service by Defining and Implementing a Program of Standards and Measures, and by Strengthening Accountability for Performance	Director and PSAP management	Upon hire of Director
5.2, 2: Quantify, and thus Improve the Transparency of the Total 'Cost' of Center Operations to Effectively Support Informed Investment Decisions and Sound Fiscal Management	Director and PSAP management	Upon hire of Director
5.2, 3: Consolidate 9-1-1 Call Processing	Director and PSAP management	According to program schedule
5.2, 4: Reduce the Amount of Unnecessary Calls Received on the Non-Emergency Lines	Director and PSAP management	Immediately
5.2, 5: Determine the Future of Law Enforcement Dispatch and Field Operations	PSCB, Director, Public Safety Leadership, PSAP management	Immediately
5.2,6: Reconfigure Call Taker Workstations	PSAP management and LCSO 9-1-1 Program Office	Immediately
5.2, 7: Develop After Hour Warrant Verification Procedures	Director, LCSO PSAP management	Upon hire of Director
5.2, 8: Minimize the Use of 10-Codes on the Radio	Public Safety Leadership, PSAP management	Immediately
5.2, 9: Consolidate Existing and Develop New Standard Operating Procedures	Director, and PSAP management	Upon hire of Director
5.2, 10: Develop Future Back-Up Capabilities	Director, TSC, PSAP management, and I.T. support staff	Per program schedule
5.2, 11: Develop the Migration/Cutover Plan	Director, TSC, PSAP management, and I.T. support staff	Per program schedule
Technology		

5.1, E: Establish the I.T. Committee to begin refining the technical needs of the consolidated PSAP	TSC, Operations, and Directors	Immediately
Establish formal decision making process for the PSCB and TSC to determine the I.T. consolidation path	PSCB, TSC, Director	Immediately

6.3 Glossary of Terms

Acronym/System	Meaning	Definition
Abandoned Call		A call placed to 9-1-1 in which the caller disconnects before the call can be answered by the Public Safety Answering Point (PSAP) attendant.
ALI	Automatic Location Identification	The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone and supplementary emergency services information of the location from which a call originates.
ANI	Automatic Number Identification (ANI)	Telephone number associated with the access line from which a call originates.
ATM	Asynchronous Transfer Mode (ATM)	A high speed, connection oriented multiplexing and switching method, specified in international standards, utilizing fixed length cells to support multiple types of traffic. It is asynchronous in the sense that cells carrying user data need not be periodic."
AVL	Automatic Vehicle Location	A means for determining the geographic location of a vehicle and transmitting this information to a point where it can be used. The primary purpose of tracking is to effectively manage resources.
CAD	Computer Aided Dispatch	A computer based system, which aids PSAP telecommunicators by automating selected dispatching and record keeping activities.
Co-location		In this configuration the emergency communications staff of each agency stays within their existing agency, but operations are co-located into one facility.
Consolidation		A single organization that is independent of police, sheriff, fire, and emergency medical services organizations with its own budget and work force and reporting lines.
CTI	Computer Telephone Integration (CTI)	Integrating telephone functions into a computing device.
E9-1-1	Enhanced 9-1-1 (E9-1-1)	An emergency telephone system which includes network switching, data base and CPE elements capable of providing Selective Routing, Selective Transfer, Fixed Transfer, caller routing and location information, and ALI.

EMD	Emergency Medical Dispatch	Dispatchers who follow carefully scripted protocols to provide medical Instructions to caller to assist the ill or injured victim while they are waiting for the emergency personnel to arrive.
GIS	Geographic Information System (GIS)	A computer software system that enables one to visualize geographic aspects of a body of data. It contains the ability to translate implicit geographic data (such as a street address) into an explicit map location. It has the ability to query and analyze data in order to receive the results in the form of a map. It also can be used to graphically display coordinates on a map i.e. Latitude/Longitude from a wireless 9-1-1 call.
GPS	Global Positioning System (GPS)	A satellite based Location Determination Technology (LDT).
LDS	Location Determination Technology (LDT)	A system which computes the x and y coordinates of a wireless 9-1-1 caller.
LEC	Local Exchange Carrier (LEC)	A Telecommunications Carrier (TC) under the state/local Public Utilities Act that provide local exchange telecommunications services. Also known as Incumbent Local Exchange Carriers (ILECs), Alternate Local Exchange Carriers (ALECs), Competitive Local Exchange Carriers (CLECs), Competitive Access Providers (CAPs), Certified Local Exchange Carriers (CLECs), and Local Service Providers (LSPs).
Logging Recorder		A voice-band audio recorder which records to and plays from a permanent storage media such as tape or disk. Logging recorders are typically multi-channel so as to simultaneously record from several sources.
Master Clock		An accurate timing device that generates synchronization signals to control other clocks or equipment. (Ref. NENA 04-002)
MIS	Management Information System (MIS)	A program that collects, stores and collates data into reports enabling interpretation and evaluation of performance, trends, traffic capacities, etc.
PBX	Private Branch Exchange (PBX)	A private telephone switch that is connected to the Public Switched Telephone Network.
Protocol		A set of rules or conventions that govern the format and relative timing of data in a communications network. There are three basic types of protocols: character-oriented, byte-oriented, and bit-oriented. The protocols for data communications cover such things as framing, error handling, transparency, and line control.
PSAP	Public Safety Answering Point	A call center that receives and processes 9-1-1 calls and uses location information to direct public safety personnel responding to the emergency to ensure the shortest possible emergency response time.

RMS	Records Management System	An electronic repository for records which provides for the effective storage, retrieval, retention, manipulation, archiving, and viewing of information, records, documents, or files that are related to a single subject. A RMS allows one source of data input and multiple reporting mechanisms and enables an agency to deal with its records in a simple environment.

7.0 CONSOLIDATION PLAN APPENDICES

(Next Page)

7.1 Operations Floor and Staff Support Area Facility Sizing

Operations Floor				
	Position	**Number**	**SF/Position**	**Total**
	Call Takers	16	65	1,040
	Teletype	2	50	100
	Dispatchers	16	115	1,840
	Supervisors	3	125	375
	Conference Area			500
	Subtotal	37		3,855
	Position	**Number**	**SF/Position**	**Total**
	Printers	4	0	0
	Copy Machine	1	25	25
	File Cabinets	25	20	500
	Facsimiles	2	0	0
		32		525
	Circulation		0.3	1,314
			Operations floor total estimated SF	5,694
	Position	**Number**	**SF/Position**	**Total**
PSAP Staff Offices				
	Director	1	250	250
	Assistant	1	100	100
	Deputy Director	1	175	175
	Budget Analyst	1	100	100
	Supervisors shared by 3 Supervisors/ office	3	250	750
	System Administrator	1	250	250

	Training Officers shared suite with 4 positions	1	250	250
	Contractor Suite Shared office space for 6 positions	1	250	250
	UFO/UPO Shared Office Space for 4	1	250	250
	911 Program Office shared office space for 3 people	1	250	250
		12		2,625
	Circulation		0.3	788
		Office Space Requirements		3,413
Estimate for Operations Floor and Staff Offices SF				**9,107**
The space requirements for the following personnel areas must be determined through a programming effort by the Architect and Engineer				
	Kitchen	1	To Accommodate a normal Shift	
	Breakroom	1	To Accommodate a normal Shift	
	Exercise Room	1	To Accommodate a normal Shift	
	Quiet Room	1	To Accommodate 2 people and private bathroom	

	Locker Rooms	2	To Accommodate one locker/employee/ requirements for sworn/non-sworn TBD/ requirements for male/female distribution TBD/ requires programming/ showers and changing facilities
	Bathrooms	2	To Accommodate a normal Shift with additional female facilities
	Training Room	1	To Accommodate 10 workstations
	Roll Call	1	To Accommodate a normal Shift
	Mini-EOC	1	TBD
	Space requirements for equipment		
	Equipment rooms (CAD/RMS/GIS/MDC/Network/Etc.)	TBD	
	IDF/TRs	TBD	
	Telco Demarc room	TBD	
	Other Space Requirements		
	Multi-Purpose/Emergency Bunk Rooms	TBD	
	Storage Rooms (for most office areas and general storage for extra furniture, emergency supplies, etc.)	TBD	
	Multi-Use Contractor Office Suite	TBD	

	Reproduction Room	TBD	
	File Room	TBD	
	Security Office at Lobby Entrance (access control systems and cameras)	TBD	
	Lobby/Waiting Area	TBD	
	Specialized Unit/Supplemental Office Suite to accommodate growth	TBD	

7.2 Estimated Costs Associated with Operational, Technical, and Facility Consolidation

Consolidated PSAP Hardware, Software, and Furnishings Cost Estimates					
Requirement	**Purpose**	**Amount/Comments**	**On-Going or One Time**	**Estimated Costs**	
Automatic Call Distributor Functionality	Distributes calls equitably among designated group of answering positions. Also allows for proper call prioritization (9-1-1 over Non-Emergency). Purchase and installation.	Enhancement to existing 9-1-1 system components. Requirement TBD.	One Time	$2,000	5,000
Software Based Telephony System	Allows information to flow seamlessly from telephone system through dispatch, response and incident closure. Utilize existing system and migrate to the new facility, to include CTI and MIS	Application/Licensing for 12 additional consoles:	One Time	TBD	TBD
CAD	Develop and validate functional requirements for EMS and Sheriff	Estimated at $250,000 - $300,000	One Time	$250,000	$300,000
CAD	Vendor configuration of current CAD for multi-agency multi-discipline call taking and dispatch services	Can utilize services of an independent entity for requirements development and validations instead of vendor to reduce costs, estimated at $400,000 - $600,000	One Time	$400,000	$600,000
RMS	Develop and validate functional requirements for Sheriff RMS	Can utilize services of an independent entity instead of vendor to reduce costs, estimated at 250,000 - 300,000	One Time	$250,000	$300,000
RMS	Vendor configuration of current RMS for multi-agency multi-discipline call taking and dispatch services	Estimated at 500,000 - 750,000	One Time	$500,000	$750,000

CAD Terminals	Estimated Number of Full CAD Terminals Necessary Prior to New Facility Cutover	This requirement results in the need for 12 additional full function CAD terminals at the new PSAP at a cost of approximately $42,530.00 + Year 2 Maintenance $6,955 for a total of $49,485 (PC costs are included below. Migrating the LCSO to Motorola CAD at the LCSO PSAP prior to new facility migration will require 11 of the 12 budgeted CAD applications and licenses)	One Time	$49,485	$49,485
Motorola CAD and RMS Applications to LCSO Assets	Add Motorola CAD software to 120 LCSO MDC's, and providing 100 licenses for the Motorola RMS application	Approximately $445,910.00 which does not include installation or configuration (Appendix 7.4).	One Time	$516,010	$516,010
Motorola CAD and RMS Applications Maintenance		$70,100 for Year 2 maintenance (Appendix 7.4)	On-Going	$70,100	$70,100
Motorola CAD for EMS Vehicles	Add Motorola CAD software to 25 EMS vehicles	Approximately $30,915.00 which does not include installation or configuration (Appendix 7.5).	One Time	$49,975	$49,975
Motorola CAD for EMS Vehicles Maintenance		Approximately $3,000.00 per year for maintenance (Appendix 7.5)	On-Going	$3,000	$3,000
TPD CAD/RMS Suite of Applications	Service and Maintenance	Annual	On-Going	$237,216	$237,216
LCSO CAD & RMS	Equipment Maintenance	Annual	On-Going	$24,000	$24,000
LCSO: Software Services:	CAD & RMS; CIB; Accounting	Annual	On-Going	$48,000	$48,000
Various Interfaces for LCSO Systems	Dependent upon needs determined by Steering and I.T. Committee		One Time	TBD	TBD

ProQA Licenses	ProQA licenses costs. Thirteen additional licenses will be needed for the TPD (6 primary call taker, 6 training, and one supervisory workstation positions)	Approximately $3,100.00 each, which does not include configuration, interface, and installation	One Time	$40,300	$40,300
Radio Dispatch Consoles	Software-based radio dispatch consoles. Purchase and installation of consoles	Existing 13 + 2 for Training Room = 15 @ 25-35k each = $375,000 - $525,000	One Time	$375,000	$525,000
Radio PCs		Existing 13 + 2 for Training Room = 15 @ $5,000 each	One Time	$75,000	$75,000
Administrative Telephones	One for each additional console to provide external phone access. Purchase and installation	34 @ $500.00 each	One Time	$17,000	$17,000
Analog Phones	One at each position to provide technical diversity and redundancy capability for 911 call taking.	34 @ $500.00 each	One Time	$17,000	$17,000
Queue Board	Visually displays number of callers in queue by emergency/non-emergency with programmable audible alarm. Purchase and installation.	Need to be determined	One Time	$35,000	$35,000
Desk-Top PCs	CAD, CTI, and Mapping (3)	2009 Migration including all existing positions + 2 = 33, + 8 training positions = 41 x 3 = 123 @ $2-$3000 each, $246,000 - $369,000	One Time	$246,000	$369,000
Video Displays	Strategically placed on mounted on walls to provide enhanced situational awareness of critical incidents, LCD, installed	4 @ $2,500 each	One Time	$10,000	$10,000
Workstation Furniture	Call center specific: Call Taker, Dispatcher, Supervisor	2009 Migration: 34 Operations Floor + 8 for Training Room = 42 @$20,000 each	One Time	$840,000	$840,000
Chairs	Purchase new chairs for all work stations to ensure uniformity 5-	2009 Migration: 34 Operations Floor + 8 for Training Room = 42 @ $600.00 each	One Time	$25,200	$25,200

Headphones	Purchase 1.5 x need	42 x 1.5 = 63 @ $50.00 each	One Time	$3,200	$3,200
Logging and Recording	Recording system for telephone and radio systems	Requirements being developed by 911 Program Manager	One Time	$250,000	$250,000
Master Clock	Ensures that all systems are synchronized	May be able to use existing Net Clocks	One Time	$1,095	$1,095
Printers, Fax Machines, Copiers	For operational and support areas	15 networked printers ($900 each), 6 dedicated printers ($500 each), 3 Photo-Copy machines ($4,000 each), 3 fax ($550 each)	One Time	$30,150	$30,150
Maintenance and Service for Printers, Fax Machines, and Printers	To be determined		On-Going	TBD	TBD
Uniforms	To be determined by Director	Need to be determined	On-Going	TBD	TBD
Subtotal: Estimated Costs for Known Hardware, Software, and Furnishing Requirements				**$4,364,731**	**$5,190,731**

Consolidated PSAP Facility and Infrastructure Cost Estimates					
These cost items need to be addressed by the Architectural-Engineering firm contracted to design the building. We have included these items for reference only. Additionally, requirements for video in the facility have not been determined.					
Generators	Provide back-up power	2 recommended	One Time	TBD	TBD
Cabling	Voice, Data and Video (redundant to each workstation)		One Time	TBD	TBD
Network	Equipment to support the transmission of Voice, Data, and Video throughout the facility		One Time	TBD	TBD
Security	Access control, cameras, recording system, guard booth		One Time	TBD	TBD
HVAC	Electrical and mechanical systems sized to support building loads		One Time	TBD	TBD
SCADA/FMS	Control and monitoring systems for MEP		One Time	TBD	TBD

Fire Detection/Suppression System (s)	Fire Detection/Suppression		One Time	TBD	TBD
Uninterruptible Power Supply	For entire building		One Time	TBD	TBD
Equipment Room Equipment	Equipment racks, patch panels, etc. for network, CAD, Radio, Telephony, video equipment, Logging & Recording, CTI, and other systems equipment		One Time	TBD	TBD
Central Vacuum System	Eliminate noise, supports clean work environment		One Time	TBD	TBD

Estimated Personnel Costs					
Current existing TPD Public Safety Staff	Current staffing as of 12 - 2006 as provided by TPD Public Safety and City of Tallahassee - 1 Public Safety Comm Manager; 7 Shift Supervisors; 42 Public Safety Comm Operator	Personnel - Total Salary($1,916,861), Salary enhancements ($95,852), temporary wages($12,070), overtime($329,787)= $ 2,354,570; City obligation for taxes, pension & benefits - Total from budget documents $ 766,714.	On-Going	$3,121,284	$3,121,284
Current existing LCSO Public Safety Staff	Current staffing as of 12 - 2006 as provided by LCSO - 1 Manager; 6 Supervisors; 4 Lead Workers (3 are CTO); 30 Officers (4 are CTO)	Personnel - Total Salary $1,339,779; County obligation for taxes, pension & benefits - Total from LCSO budget documents $562,377.	On-Going	$1,902,156	$1,902,156
Additional 6 Public Safety personnel	Based on manpower staffing - add 6 personnel for Public Safety Communications	Approximate salary at Public Safety Officer level (Leon County source) $26,587; Anticipated County/City obligation for taxes, pension & benefits - $11,698. Total $38,285 X 6 = $229,710	On-Going	$229,710	$229,710

Director	Currently Advertised	98972.12 plus County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $98,972 X .44 = $43,547 =	On-Going	$142,519	$142,519
Assistant Director	Serves as assistant director to the new organization.	Recommended for new organization. One FTE. Approximately $ 65,000 - 80,000. (based on Director advertised salary range as $72,990.27 - $98,972.12) Average $ 72,500 (Annual Salary) County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 72,500 X .44 = $ 31,900.	On-Going	$104,400	$104,400
Management Analyst (Budget)	Oversees the budget for the new organization. Develops budget submissions, accounting reports, and audits.	Recommended for new organization. One FTE. Average Annual Salary (City of Tallahassee source) $ 55,785. County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 55,785 X .44 = $ 25,545.	On-Going	$104,400	$104,400
Administrative Assistant II	Maintains documentation, interfaces with staff to develop work and training schedules, provide records management and personnel support.	Recommended for new organization. Two FTE - One assigned to records services and operational requirements; One assigned to personnel actions and support. Average Annual Salary (City of Tallahassee source) $ 44,479 X 2 = $ 88,958. County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 88,958 X .44 = $ 39,141 .	On-Going	$128,099	$128,099

IT Support Manager	Supervisor Information Management Systems. Manage the IT support team. Serve as the technical SME for Public Safety Communications. Business Unit Systems and Applications Coordinator.	Recommended for new organization. One FTE. Strictly assigned to support the new organization and IT services. Approximate Salary - $ 61,000 (Averaged from City of Tallahassee source). County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 61,000 X .44 = $ 26,840.	On-Going	$87,840	$87,840
IT Support Technician	1. CAD Administrator 2. Public Safety GIS Coordinator 3. General IT service and support. IT personnel work as a team to maintain the various systems. For example, the CAD application is integrated with: • Automatic Vehicle Location (AVL) • Advanced Tactical Map (ATM) • Graphic Geofile Manager (GGM) • Open Query (OQ) • Premier Mobile Data Computer (PMDC) • Universal Data Transfer (UDT) The Infotrak Records Management System is integrated with: • Computer Aided Dispatch (CAD) • HTE Incident and Traffic Crash Report applications (FBR) • Premier Mobile Data Computer (PMDC) • Infotrak Investigative Query (IIQ) • Graphic Geofile Manager (GGM) • Universal Data Transfer (UDT)	Recommended for new organization. Three FTE. One to support CAD; One to support RMS & other related services; One to support other IT systems and applications. Approximate Salary - $ 52,000 (Averaged from City of Tallahassee source). County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 52,000 X .44 = $ 22,880. Total $ 74,880 X 3 = $ 224,640.	On-Going	$224,640	$224,640

Administrative Clerk	Clerical support employees. Typing, correspondence preparation, tracking, filing, and administrative phone support.	Recommended for new organization. Three FTE. One for Director & Staff; One for Administrative & Personnel support (administrative phones); One for technical manual, SOP, Training support. Average Salary: $ 23,617 (Source City of Tallahassee) County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 23,617 X .44 = $ 10,391. Total: $ 34,008 X 3 = $ 102,024.	On	$102,024	$102,024
Subject Matter Expert Project Support	To lead and support the recommended Project Committees	Five FTEs, salary dependent on skills required to support each Committee. Approximate Salary - $ 52,000 (Averaged from City of Tallahassee source). County/City budget obligation for taxes, pension and benefits calculated at 44% of salary. $ 52,000 X .44 = $ 22,880. Total $ 74,880 X 5 = $ 374,400.	On-Going	$374,400	$374,400
Security Guards	Contracted Armed Security, 2 per shift.	In some agencies, the Facilities Management Division oversees the general security of the facility to include the security officers, access control system, employee identification badges, CCTV, the maintenance of all security equipment, including issuing, tracking, and controlling issued keys and installing and repairing key and lock sets. Could utilize County Sheriff or City Police resources.	On-Going	TBD	TBD
Subtotal: Personnel Costs				**$6,521,472**	**$6,521,472**

Other Costs					
Facility Maintenance	Provide preventive maintenance services, respond to routine and emergency service calls, and perform minor repair and alteration to the new facility	Contract with City or County for facility maintenance	On Going	TBD	TBD
Current TPD Information Services Support	TPD: Paid as an obligation from TPD Public Safety Organization to a combined IT operation fund	Annual	On-Going	$151,818	$151,818
Current TPD Personnel Public Safety Support	TPD: Personnel Public Safety Other Budgeted expenses		On-Going	$351,432	$351,432
Current TPD Personnel Services Bureau	TPD: Personnel Service Bureau Total Salary & Benefits	Only the percentage of direct service to the public safety communications is included.	On-Going	$67,338	$67,338
LCSO Personnel	LCSO: Insurance, Training, Uniforms, Supplies		On-Going	$90,404	$90,404
LCSO	LCSO: Office Machinery and Furniture		On-Going	$40,000	$40,000
Subtotal: Other Costs				**$700,992**	**$700,992**
Total Estimated One-Time Costs (Consolidated PSAP Hardware, Software Service and Maintenance and Related Services)				**$4,017,515**	**$4,843,515**
Total Estimated On-Going Costs (Consolidated PSAP Hardware, Software, Furnishings, Personnel, and Other)				**$7,569,680**	**$7,569,680**

7.3 Estimated CAD Application and Licensing Costs for the LCSO PSAP

Quote CM-032007-DC

BUDGETARY PRICING DETAIL

This information provided in this quote is provided for informational (or budgetary) purposes only and does not constitute an offer to sell or license any Motorola product. This quote is not binding on Motorola and Motorola is making no representations, warranties, or commitments with respect to pricing, products, or terms and conditions which would require more information and further detailed analysis of the requirements for which this quote is requested.

Category	Description	Quantity	Each	Total Price
Motorola CAD Software				
	CAD Workstation with Mapping - CAD and AWW and ATM	12	$2,655.00	$31,860.00
	Open Query Client Licenses Per License Fee (1-25 workstations) - charge per user	12	$472.00	$5,664.00
Motorola-Interfaces				
	9-1-1 Inc. 9-1-1 Interface	1	$5,900.00	$5,900.00
Other Hardware and Software				
	MS SQL Client Access License	12	$173.00	$2,076.00
	MS Windows Server 2003 Client Access License	12	$30.00	$360.00
	Grand Total			**$45,860.00**

Maintenance Summary (First Year Included)	
Year 2	$6,955
Year 3	$7,303
Year 4	$7,668
Year 5	$8,052

Note: *Maintenance pricing is based on 2007 rates, subject to then current rates upon commencement. Changes to configuration or count will result in a change to maintenance pricing.*

7.4 Estimated MDC CAD and Desktop RMS Application and Licensing Costs for the LCSO

City of Tallahassee - Law Addition
Quote CM-032007-LAW

BUDGETARY PRICING DETAIL

This information provided in this quote is provided for informational (or budgetary) purposes only and does not constitute an offer to sell or license any Motorola product. This quote is not binding on Motorola and Motorola is making no representations, warranties, or commitments with respect to pricing, products, or terms and conditions which would require more information and further detailed analysis of the requirements for which this quote is requested.

Category	Description	Quantity	Each	Total Price

Motorola PMDC Software

Premier MDC Server Software License Upgrade (from 501 up to 1000 units)	1	$41,300.00	$41,300.00
Premier MDC Client License	120	$885.00	$106,200.00
Premier MDC In-house Client Software	10	$519.00	$5,190.00
GPS Integration Client Module (charge per user)	120	$59.00	$7,080.00

Other Hardware and Software

BI Server 20 Concurrent Port Volume License	1	$30,000.00	$30,000.00
BI Query Single User License (1-4)	10	$834.00	$8,340.00

Motorola Infotrak LRMS Software

RMS Server Fee, Second Agency (51-200 Users)	1	$47,200.00	$47,200.00
RMS Administer Client Access License	100	$1,888.00	$188,800.00
RMS Query Only Client Access License	100	$118.00	$11,800.00
Grand Total			**$445,910.00**

Maintenance Summary (First Year Included)	
Year 2	**$70,100**
Year 3	**$73,605**
Year 4	**$77,285**
Year 5	**$81,150**

Note: *Maintenance pricing is based on 2007 rates, subject to then current rates upon commencement. Changes to configuration or count will result in a change to maintenance pricing.*

7.5 Estimated MDC CAD Application and Licensing Costs for EMS

City of Tallahassee - EMS Addition

Quote CM-032007-EMS

BUDGETARY PRICING DETAIL

This information provided in this quote is provided for informational (or budgetary) purposes only and does not constitute an offer to sell or license any Motorola product. This quote is not binding on Motorola and Motorola is making no representations, warranties, or commitments with respect to pricing, products, or terms and conditions which would require more information and further detailed analysis of the requirements for which this quote is requested.

Category	Description	Quantity	Each	Total Price
Motorola PMDC Software				
	Premier MDC Client License	25	$885.00	$22,125.00
	Premier MDC In-house Client Software	5	$519.00	$2,595.00
	GPS Integration Client Module	25	$59.00	$1,475.00
	ATM Vehicle Client License	25	$944.00	$23,600.00
	Grand Total			**$49,795.00**

Maintenance Summary (First Year Included)	
Year 2	$4,716

Year 3	**$4,952**
Year 4	**$5,199**
Year 5	**$5,459**

Note: *Maintenance pricing is based on 2007 rates, subject to then current rates upon commencement. Changes to configuration or count will result in a change to maintenance pricing.*

7.6 PSCB Memorandum of Agreement

No. 999155

MEMORANDUM OF AGREEMENT

THIS AGREEMENT, made and entered into this 13 day of DEC, 2006, by and between LEON COUNTY, a political subdivision of the State of Florida (hereinafter referred to as "County"), the CITY OF TALLAHASSEE, a Florida municipal corporation (hereinafter referred to as "City"), and the LEON COUNTY SHERIFF, a separately elected county officer of the State of Florida (hereinafter referred to as "Sheriff").

WHEREAS, the County, City, and Sheriff wish to enter into an agreement that will ensure the creation of a joint dispatch center for the purposes of dispatching all law enforcement, fire and emergency medical services; and

WHEREAS, currently the City dispatches Tallahassee Police Officers and the Tallahassee Fire Department; the Sheriff's office currently dispatches Leon County Sheriff Deputies and Leon County Emergency Medical Services; and

WHEREAS, consolidating the dispatching of all law enforcement and emergency personnel is in the best interest of the health and safety of all Leon County and City of Tallahassee residents; and

WHEREAS, a consultant jointly hired by the City and County recommended that the dispatch functions for Fire and Emergency Medical Services be consolidated; and

WHEREAS, at the April 25, 2006 Board of County Commissioners meeting the Sheriff stated that the consolidated dispatch should include all emergency functions, inclusive of law enforcement; and

WHEREAS, on April 25, 2006, the County agreed to the creation of a joint dispatch operation; and

WHEREAS, on April 26, 2006, the City agreed to the creation of a joint dispatch operation; and

WHEREAS, the Public Safety Communications Board (hereinafter referred to as "PSCB") acknowledges that this Memorandum of Agreement may need to be revised to take into consideration future consultant recommendations.

NOW, THEREFORE, in consideration of the following mutual promises, covenants, and representation set forth herein, the sufficiency of which is being acknowledged, the County, City, and the Sheriff hereby agree as follows:

1. Term. The Term of this Agreement shall commence on the date on which it has been executed by all parties, and shall end January 1, 2011, unless replaced by a formal Florida Statutes Chapter 163 Interlocal Agency Agreement.

II. Public Safety Communications Board (PSCB).

A. The County, City, and Sheriff agree to establish the PSCB to oversee the implementation and operation of a consolidated dispatch center.

B. The PSCB will consist of the County Administrator, the City Manager, the Sheriff, Chief of Police, Fire Chief and EMS Chief or their designee.

C. In addition to any other responsibilities, the PSCB will replace the existing Management Oversight Committee (MOC) established per the July 23, 1999 Agreement regarding the 800 Mhz system.

D. The PSCB will annually select a Chairman and Vice-Chairman.

E. The PSCB will meet on a regular basis, but no less than four times a year.

III. Director of Public Safety Communications.

A. The County, City and Sheriff agree that, throughout the term of this agreement (including extensions thereof), a Director of Public Safety Communications will be responsible for the joint communications center and will meet all requirements of, and will perform all duties and obligations required of a public safety communications director under, applicable law.

B. The PSCB will be responsible for the hiring of such a director and will ensure that at all times the Director is responsible for daily operations and supervision of all employees of the Public Safety Communications Center.

C. The Director can be terminated by the PSCB as a whole or by any one of the following independently: County Administrator or City Manager or the Sheriff.

IV. Location. The County, City, and Sheriff agree that the location for the Public Safety Communication Center will be mutually agreed upon by all parties.

V. Implementation Plan

A. The PSCB will be responsible for the development of an implementation plan.

B. The PSCB may utilize a consultant in developing the implementation plan.

C. The implementation plan may include, but not be limited to: personnel integration, technology integration, creation of a time line for integration, and the determination of financial needs.

VI. Subsequent Agreements. It is the intention of the City, County and Sheriff to, upon completion of this initial development work, execute a Florida Statute Chapter 163 Interlocal Agency Agreement with a term of not less than ten years.

IN WITNESS WHEREOF, the Parties hereto, through their duly authorized representative, have executed this Public Safety Communications Consolidation Agreement as of the date first written above.

LEON COUNTY, FLORIDA

By: _____

C.E. DEPUY, JR.,
Chairman, Board of County Commissioners

ATTESTED TO:

By: _____

ROBERT B. INZER,
Clerk, Leon County, Florida

APPROVED AS TO FORM:

By: _____

HERBERT W.A. THIELE, Esq.
COUNTY ATTORNEY

CITY OF TALLAHASSEE, FLORIDA

By: _____

JOHN R. MARKS, III,
Mayor of the City of Tallahassee

ATTESTED TO:

By: _____

GARY HERNDON,
City of Tallahassee Treasurer - Clerk

APPROVED AS TO FORM:

By: _____

JAMES R. ENGLISH, Esq.
CITY ATTORNEY

LEON COUNTY SHERIFF, FLORIDA

By: _____

LARRY CAMPBELL,
Leon County Sheriff

APPROVED AS TO FORM:

By: _____

ALAN GRINER, Esq.
SHERIFF ATTORNEY

8.0 CURRENT DISPATCH OPERATIONS APPENDICES

8.1.1 Governance and Organization

All key findings related to governance and organization were presented in Chapter 4.1.

8.1.2 Operations

LEON COUNTY SHERIFF'S PSAP

Current Business Processes

When Communications Officers report for duty they respond to their workstation positions and receive a briefing from the outgoing call takers and dispatchers before assuming their duties. There is no roll call or other meeting of employees and management prior to the tour of duty.

Incoming Calls

There are two main lines through which the LCSO PSAP receives calls; 9-1-1 landline, and the published non-emergency number. The 9-1-1 lines primarily receive emergency calls for Sheriff and EMS. The Center does not have an ACD. When 9-1-1 calls arrive they are forwarded to all call taker positions with an audible and visual alert until the call is answered. Any 9-1-1 call that is not answered within 15 seconds is forwarded (defaults) to the TPD PSAP. Call takers actively handling 9-1-1 calls continue to receive an audible alert at their workstation for unanswered 9-1-1 calls but not the visual alert.

The non-emergency line essentially operates as a switchboard with call takers transferring calls to appropriate persons within the Sheriff's Office or taking messages when necessary. The Center also has tie lines from Georgia-Florida, and Sonitrol Alarm companies in the dispatch radio room. Dispatchers answer, process, and dispatch the calls. Other alarm companies utilize the non-emergency number.

The Center is E-9-1-1 Phase 2 compliant and call takers receive the caller's location on a mapping terminal if the caller is using a mobile phone that is Phase 2 compliant. Mobile phones that are not Phase 2 (location capable) are located using cell tower face mapping technology. Callers to the non-emergency line who wait for their call to be answered are greeted by a Public Safety Announcement from the Sheriff until their call is answered.

The center does not utilize a queue board or similar device to monitor call taker and incoming call activity and does not have a Service Level Objective for the speed to answer 9-1-1 or non-emergency calls.

9-1-1 Call Processing

Our team spent two hours on the operations floor monitoring emergency and non-emergency phone lines and observing general operations. All call takers are trained in Sheriff and EMS call taking, Sheriff dispatching, and Teletype operations. The call takers operate two desk phones; one dedicated to 9-1-1 calls and one dedicated to the non-emergency line. Call takers can utilize a headset for each line. However, because the systems are not integrated, call takers prefer to use the handsets because one headset cannot be used for both 9-1-1 and the non-emergency line. The

call taking and dispatching areas are in separate areas of the operations floor. There are no dividing walls between each call taking terminal or each dispatch terminal and cross-talk can be disruptive to operations.

When a new 9-1-1 call needs to be answered, the call taker interrupts the non-emergency caller to ask if they can be placed on hold. The caller is then placed on hold and the call taker answers the new 9-1-1 call. When the 9-1-1 call is concluded, and there are no new 9-1-1 calls waiting to be answered, the call taker then resumes their call with the non-emergency caller.

In accordance with the Leon County Emergency Telephone Number System SOP #01, call takers utilize a standard call greeting for 9-1-1 lines. If a 9-1-1 caller fails to acknowledge the call takers greeting and there is silence on the other end of the line the call taker attempts a call back. If there is no response they will dispatch a deputy to the location.

Calls for Law Enforcement Service: Calls requesting law enforcement services on the 9-1-1 and non-emergency lines are processed by call takers and forwarded via CAD to the Law Enforcement Dispatch positions.

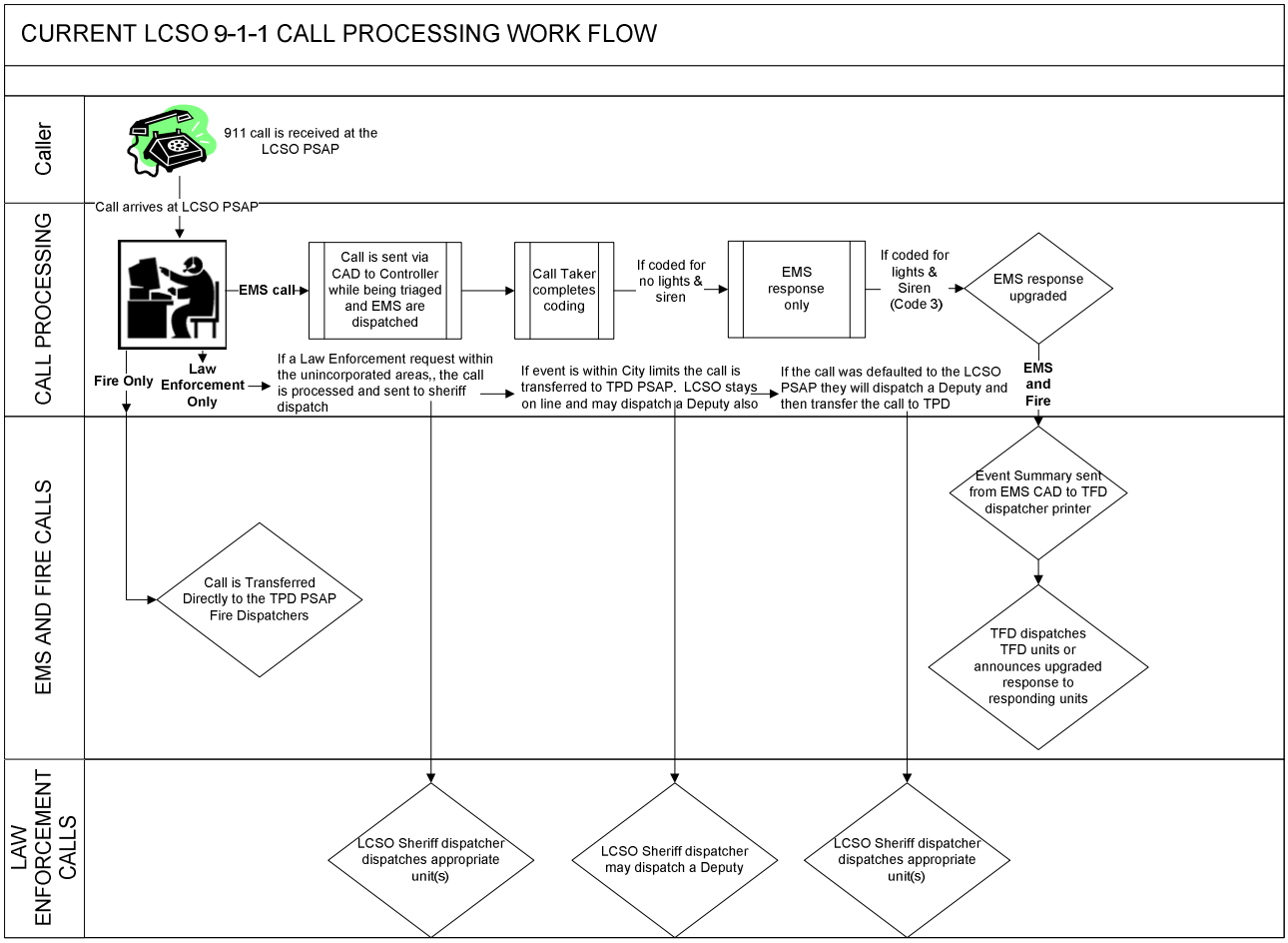
Calls for Emergency Medical Services: When a call for emergency medical services is received by a call taker, they 1) validate the address, and 2) create a call for service in CAD by completing the minimum mandatory data fields (address, phone number, line on which the call was received, and nature of the call). After the call taker selects the appropriate "Nature" choice, if it is an emergency medical call the system automatically sends the case to the EMS "Controller" who serves as the EMS Watch Commander, and is seated next to the EMS dispatcher.

Calls for Fire Department Services: Calls requesting the services of the Fire Department are immediately transferred to the TPD for processing and dispatch.

Multi-Discipline Responses: When a call for EMS arrives that also requires a Fire Department response, EMS is considered the primary service provider and the call is processed accordingly. If the call taker can, they may ask the call taker seated next to them to notify the Fire Department.

Additional Dispatch Duties: After hours, weekends, and holidays, calls for the ACA and AC Shelter a recording to call the non-emergency number. Florida Interoperability Network (FIN) is monitored by all dispatchers. There are tie lines from Georgia-Florida, and Sonitrol Alarm companies the dispatch radio room. They must enter in CAD and dispatch (burglary and hold up alarms. Residential and commercial alarms)

The LCSO PSAP 9-1-1 call processing workflow is illustrated in the below diagram.



Non-Emergency Line Call Processing

The PSAP also operates as a switchboard for the Sheriff's Office, which has been determined to be the primary use of the non-emergency line. Call takers transfer calls to appropriate persons within the Sheriff's Office, fulfill information requests, or take messages when necessary.

Dispatching

All radio dispatch positions have TTY functionality. Each discipline (Sheriff and EMS) has dedicated dispatchers and dispatch areas on the operations floor. Calls for service can be dispatched via MDC's. On each tour of duty there are three dispatchers working; one dispatcher controls Channel 1, one dispatcher controls Channels 2 and 3, and one dispatcher controls Channel 4. The LCSO Radio Channel (talk group) assignments are as follows:

Channel 1 (LCSO 1)
This talk group is designated for Uniform Patrol primary radio traffic, calls for service and information. This is monitored by a primary dispatcher in the radio room sitting in position one (1).

Channel 2 (LCSOTY)
This talk group is for teletype radio communications. Patrol Deputies will run tags, person, wants and warrants over this talk group. It is normally monitored at position 2 in the radio room and staffed with one dispatcher.

Channel 3 (LCSO3)
This is the secondary talk group for uniform patrol and is used by all sworn and non sworn personnel to check on and off duty. This talk group becomes primary when channel one has emergency traffic. This talk group is also monitored by the above channel 2 dispatcher and works in the position 2 in the radio room.

Channel 4 (C I 1)
This is the primary talk group for all other support units, such as warrants, School Resource Deputies, CIB Detectives. This talk group is monitored by one dispatcher and normally works at position 3 in the radio room.

The system is an 800 MHz Motorola trunked system with simulcast capabilities. Any on the above channels can be utilized from all the positions in the radio room. The Center requires a minimum of three (3) dispatchers or the radio room operations. All talk groups can be patched and handled by two dispatchers if needed. Normally this is done by patching channel 3 and 4 together. The channel 2 - 3 dispatcher along with the channel 4 operators may be required to monitor other talk groups as necessary for certain operations. All radio room dispatchers monitor the FIN (Florida Interoperable Network) system that is located in the room and respond to interoperable request as needed.

Alerts, BOLO's and Emergency traffic are simulcast over all the 4 primary talk groups and can be activated at any of the three dispatch positions. All marked patrol vehicles except SRD's and Crime Scene have MDC's on which they can view only the status of other Deputies who are on duty and signed on to their MDC via CAD. MDC CAD functionality is limited to this "view only" function and there is no other access to CAD functionality. Reference materials such as such as static maps, General Orders, site maps, floor plans, and MS WORD are loaded onto the MDC's. All MDCs have access to NCIC/FCIC.

LCSO dispatch also serves as the County Warning Point (CWP) for Leon County. The CWP receives and disseminates jurisdiction wide emergency management related alerts and warnings, as well as coordinating the flow of information to the State Warning Point.

Emergency Medical Services Dispatch: When a call for emergency medical services is received by a call taker, they 1) validate the address, and 2) create a case in CAD by completing the minimum mandatory data fields (address, phone number, line on which the call was received, and nature of the call). After the call taker selects the appropriate "Nature" choice, if it is an emergency medical call the system automatically sends the case to the EMS "Controller" who serves as the EMS Watch Commander, and is seated next to the EMS dispatcher. The Controller decides which unit will respond and assigns the closest available unit to respond to the call for service while the call taker is triaging the call (pre-alert) or wait until the call is completely triaged. After the case is dispatched on Channel 1, the CAD sends a text page to everyone on the

assigned EMS unit and a supervisor as appropriate. After the case is dispatched, the Controller and responding unit(s) switch to Channel 2 in order to obtain additional information related to their assignment (patient age, history, etc.).

As soon as the Controller concludes their dispatch of EMS to a Code 3 case, they click an icon on their desk-top which causes a summary of the case to be automatically printed on the TPD Fire Dispatch position printer. When Code 3 cases are sent to the TPD Fire Dispatch printer the print-out indicates the time the call was answered and the time the case was classified as a Code 3. It does not print a complete CAD chronology. Because Code 3 emergency medical calls may begin as a Code 1 or 2 when they are initially triaged by the Controller, and this information is not indicated on the TPD Fire Department CAD printout that is sent, TPD Fire Dispatch may assume that there was a delay in notification when in fact there was not. LCSO policy is that a Deputy will be dispatched to every EMS call involving a life-threatening emergency

Dispatchers not engaged in dispatching activities monitor the incoming call screen, and may dispatch other support units based on the currently available information. The EMS Controllers are only trained as call takers and EMS dispatchers; they do not work with Teletype or dispatch for other disciplines. All EMS controllers are qualified as either a paramedic or Emergency Medical Technician (EMT). EMS dispatchers utilize AVL to send the nearest available unit and to determine "posting" of units based on CAD history and unit availability. EMS AVL calculates the shortest distance by statute miles, not the road network, in determining closest unit response. Closest unit response is considered to be the closest available on-duty unit in the County. The Controller can override the AVL recommendations as necessary. The EMS dispatcher and Controller have the ability to answer 9-1-1 calls.

EMS calls are "coded" (prioritized) by the call taker and EMS Controller based on the caller's responses to call taker questions as follows;

- Code 1: scheduled transport
- Code 2 (low priority)
- Code 3 (high priority)

Teletype

The primary teletype terminal for the Sheriff's Office is located in the Communications Center. Teletype tasks include entries, administrative messages, and confirmations. Validations are performed by the Records Section for all entries except warrants, injunctions, and writs. The Warrants Unit validates those entries.

The Communications Manager is the TAC (Terminal Agency Coordinator) for the Sheriff's Office. The Communications Manager is also one of three LAI (Local Agency Instructor) for the NCIC/FCIC. One other is a Shift Supervisor and a Sergeant at the jail.

Communications center staff must have 24hour access to the hard copies of the warrants. The Sheriff's Office houses all Warrants and Injunctions at the Warrants Unit.

Warrants

The LCSO Warrants Unit maintains all warrants for the County. Whenever a Deputy in the field encounters a person who has an outstanding warrant in the system (NCIC/FCIC) and they develop any concern regarding the validity or contents of the warrant, the Communications Center is responsible for locating the hard copy of the warrant and verifying its authenticity and any other information that may be required.

The Warrant Unit is normally staffed from 8:00 a.m. to 5:00 p.m. Monday through Friday. Therefore, the Communications Center retains a key to the Warrants Unit for after hours warrant verification. When a warrant needs to be validated, any available Communications Center employee responds to the Warrants Unit. They locate the hard copy of the warrant, confirm that it is active and that the person wanted characteristics are the same as the person in custody. The Communications Center averages from 1-3 after hour requests for information each day.

The Duty Office in the lobby of the building is staffed by a Deputy 24 hours a day, 7 days a week whose purpose is to assist visitors, and provide law enforcement related services over the phone.

Supervision and Leadership

Supervisors receive a copy of their position description when they are first promoted. However, the Center has not established clear role definitions for supervisors; there is no SOP telling them the important tasks they should undertake each day. Their activities are more the result of practice and custom, not training. The Center does not have its own mission statement; it aligns itself with the Sheriff's mission statement. There is no incentive or awards program.

When employees report for duty they respond to their workstation positions and receive a briefing from the outgoing call takers and dispatchers before assuming their duties. There is no roll call/meeting of employees and management prior to the tour of duty and there are not any regularly scheduled staff meetings for management and line personnel.

Customer Service

Citizen satisfaction with services provided is not measured, monitored, tracked or evaluated for the emergency and non-emergency services provided. Citizen complaints are the primary source of citizen feedback. Periodic efforts are made to educate callers on the purpose and appropriate use of 9-1-1 and the non-emergency lines by Leon County Emergency Management, and via the LCSO web-site.

There is not currently any consistent effort in place to promote and enhance the image of the PSAP within the community. The proper use of 9-1-1 is explained when officers give presentations at schools and during citizen police academy training.

The PSAP does not have a plan to manage its relationship with the media or a formal strategic plan that outlines a shared vision for the PSAP across the various stakeholder groups (e.g., Police, Fire, Sheriff, and EMS.

The PSAP does have a formal Quality Assurance (QA) program where supervisors conduct a random review of logging recordings, and CAD incidents. A QA position has been established which has primary responsibility for tracking and monitoring performance. The position is rotated amongst supervisors every six months.

The Leon County Sheriff's Office web-page only states "Non-emergency- 850-922-3300". There is no mention on the proper use of the 9-1-1 or non-emergency lines on the web-site. The Leon County EMS web-site presents an entire section on 9-1-1 Services which explains the proper use of 9-1-1".

CITY OF TALLHASSEE POLICE DEPARTMENT PSAP

Incoming Calls

There are two main lines through which the TPD PSAP receives calls; 9-1-1 landline, and the published non-emergency number. The 9-1-1 lines are intended to receive emergency calls for Police, Fire, and EMS.

The Center does not have an Automatic Call Distributor (ACD). An ACD is a combination of hardware and software that automatically distributes incoming calls to available PSAP attendants in the order the calls are received, or queues calls until a call taker becomes available. When 9-1-1 calls arrive through the system, they are routed to all call taker positions with an audible and visual alert at each workstation that does not stop until the call is answered. Any 9-1-1 call that is not answered within 15 seconds is forwarded (defaulted) to the LCSO PSAP. If not answered within 15 seconds at the LCSO the call rolls over between the PSAPs until it is either answered by a call taker or abandoned by the caller. Call takers actively handling 9-1-1 calls continue to receive an audible alert at their workstation for unanswered 9-1-1 calls but not the visual alert. When Fire Dispatchers are available they may answer 9-1-1 calls at their discretion.

The non-emergency line essentially operates as a switchboard with call takers handling many general information requests for City services and calls for the headquarters staff. Call takers processing calls for City services provide referral information to callers and transfer them directly to other City agencies. Call takers also transfer calls to appropriate persons within the Police Department and to employee voice mail boxes. The Center does not have any bilingual call takers but does utilize a language line for non-english speaking callers.

The Center also has tie lines from two alarm companies that ring to a dedicated line on the non-emergency call taker desk telephone. All Other alarm companies utilize the non-emergency number for notification. When a call for service (CFS) for an alarm is dispatched which results in a crime or incident report being initiated, the CFS is reclassified from an alarm to an incident.

The Center is E-9-1-1 Phase 2 compliant, which means that its systems have the capability to receive and process Automatic Number Identification (ANI) and Automatic Location Information (ALI) for wireless (mobile phone) calls which provides a caller's telephone number and their location on a map to the call taker.

9-1-1 Call Processing

All Public Safety Communication officers (PSCOs) are trained in Police and Fire call taking, dispatching, and Teletype Operations. Throughout this report we will refer to the PSCOs as call takers, dispatchers, or teletype operators depending on the topic under review. Call takers operate two desk-top phones; one dedicated to 9-1-1 calls and one dedicated to the non-emergency line. A headset is available for each line. However, because the non-emergency line is not integrated into the 9-1-1 system a single headset cannot be used to answer both lines. Therefore, most call takers do not utilize headsets as they handle many more non-emergency than 9-1-1 calls and must be able to easily switch between phone lines. Call takers and dispatchers at both PSAPs utilize a Computer Aided Dispatch System (CAD) to process calls for service that require a public safety response.

Calls for Police Service: Calls requesting law enforcement services on the 9-1-1 and non-emergency lines are processed by call takers. Call taking consists of receiving the call, obtaining sufficient and accurate information from the caller, determining if this is a duplicate of a call in progress, and recording or updating the call for service CFS in the CAD system. The Call taker may also apply procedures and guidelines to verify, analyze, classify, and prioritize the call prior to routing the CFS to the dispatcher.[16]

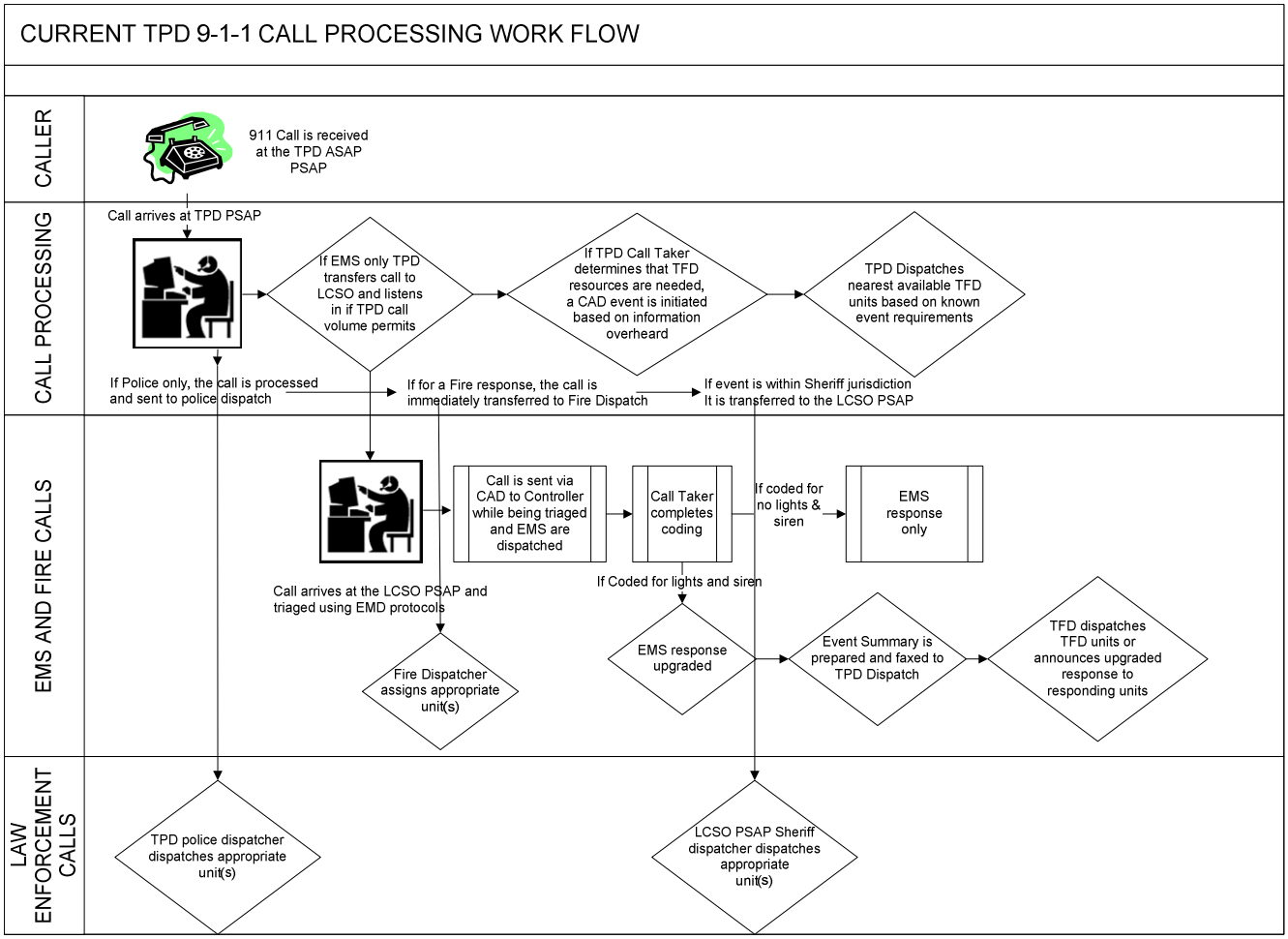
Calls for Fire Department Services: Calls requesting the services of the Fire Department are immediately transferred to the Fire Dispatch positions within the PSAP for processing and dispatch.

Multi-Discipline Responses: When a multi-discipline response is required the CAD generates incidents for both Police and Fire dispatch positions. The CAD can also be configured to generate simultaneous incidents for EMS or any other discipline.

Calls Received for Emergency Medical Services: Because EMS dispatchers are not located at the TPD Center, a two tier process is utilized for the notification and dispatch of EMS resources. When a call for emergency medical services is received by a call taker they immediately transfer the call to the LCSO PSAP call takers while remaining on the line. If the emergency call volume permits and the call may be a life threatening situation, the TPD call taker will monitor the call, initiate a CAD incident, and dispatch the Fire Department based on the information they overhear.

The current TPD PSAP 9-1-1 call processing workflow is illustrated in the below diagram.

[16] Standard Functional Specifications for Law Enforcement Computer Aided Dispatch (CAD)Systems developed by: The Law Enforcement Information Technology Standards Council (LEITSC)



Non-Emergency Line Call Processing

When all call takers are handling calls, there are no 9-1-1 calls waiting to be answered, and the non-emergency line rings, call takers who are already occupied on non-emergency calls will answer the new non-emergency line and ask the caller if they can hold. If acceptable to the caller, they are then placed on hold and provided service when the call taker concludes their currently active call. When a new 9-1-1 call needs to be answered, the call taker interrupts the non-emergency caller to ask if they can be placed on hold. The caller is then placed on hold and the call taker answers the new 9-1-1 call. When the 9-1-1 call is concluded, and there are no new 9-1-1 calls waiting to be answered, the call taker then resumes their call with the non-emergency caller.

When a person calls 9-1-1 with a non-emergency request call takers are instructed to handle the call if 9-1-1volume permits or tell the person to call back on the non-emergency line. In accordance with the STO 9-1-1 guidelines call takers utilize a standard call greeting for 9-1-1 lines as established in SOP #4 techniques and phrases. However, call takers do not identify themselves during the call greeting.

The PSAP also operates as a switchboard for the Police Department. Citizens who call the non-emergency line to reach an employee in the building are transferred to the appropriate office or to the employee's voice mail box. As is often the case at 9-1-1 Centers, it was also observed that many 9-1-1 calls were not true emergencies or emergencies of any kind but merely requests for information such as " How do I get the phone number for the jail", "What is the phone number to the Third District police station", etc. Call takers also handle citizen requests for tows from private property and repossessions.

The PSAP handles after hours notifications for City services such as gas, water, sewer, traffic, and solid waste. The Center maintains pager numbers and after hour phone numbers that are used to notify City services staff of after hours emergencies that are received on the phone or from City agencies and officers in the field.

Dispatching

Each discipline (Police and Fire) has dedicated dispatchers and dispatch areas on the operations floor. Fire Dispatch terminals are configured so that they can answer 9-1-1 calls as necessary. Police officers can assign themselves low-priority assignments on their MDC's (modified dispatch) in order to minimize unnecessary voice traffic on the radio. Each of the three TPD patrol zones has a dedicated radio channel with dispatcher each tour of duty. Zones D and E are staffed as necessary.

Zone A	Zone B	Zone C	Zone D	Zone E
Alpha District	Bravo District	Charlie District	City E	Mutual Aid Call

All City departments that have a dispatch component utilize an 800 MHz system and all TPD dispatchers monitor a common talk group, the City Emergency (E) Channel, in the background. The Center serves as an emergency support dispatch center for City services. For example, should a bus driver transmit an emergency on the E channel, the TPD will ascertain the nature of the emergency and dispatch the appropriate public safety resources. All dispatchers also monitor the Florida Interoperability Network at the supervisor's desk, which includes a direct link with the Tallahassee Capital Police, a branch of FDLE (State Police) the background.

The TPD utilizes AVL to dispatch. When an officer logs on to their MDC they enter into CAD their assigned beat area. When a call for service is processed by the call taker and sent to the dispatcher CAD recommends the closest on-duty unit (regardless of status) within a two mile radius of the call for service. The recommendation is in the form of a list presented by CAD to the dispatcher which lists the closest to the furthest unit from the call for service. The dispatcher then decides which unit to send based on the priority of the assignment and unit locations. The AVL is configured to consider the City as a whole without regard to District or Radio Channel boundaries when polling the two mile radius from the call for service. The AVL calculates closest available unit by statute miles, not the road network. The TFD utilizes AVL on the MDCs in their mobile units but it is not incorporated into their dispatching business practices. Its primary use is for receiving textual and graphical driving directions to their assignments.

The TPD utilizes an application, Teleserve, to prepare incident reports from citizens over the phone. The primary purpose of Teleserve is to provide for secondary receiving of police reports when it is not necessary for a police officer to visit a crime scene. Certain categories of incidents are defined as those which a Teleserve or a Duty Officer may take by telephone.

There are two full time civilian "Customer Service Aide" positions allocated to Teleserve and both are staffed. In 2006, 2,687 incident reports were completed. Approximately 90% of the calls come from the non-emergency line and no calls originate from 9-1-1. The remaining reports are the result of referrals and from citizens who respond to the police department.

Teletype

The two primary teletype terminals for the TPD are located in the Communications Center. Teletype tasks include entries, administrative messages, and confirmations. Validations are performed by the Records Division for all entries. The dedicated Teletype terminals have access to the Driver and Vehicle Identification Database (DAVID) which maintains operator history and can access driver's license photographs on-line. The TPD rarely requests validation of warrants through the LCSO PSAP.

Supervision and Leadership

The Center has not established clear role definitions for supervisors. Other than position descriptions and what is discussed at management meetings, there are no policies or procedures that outline the specific daily responsibilities of supervisors.

In approximately October of 2006, Center leadership developed a mission statement for the Center and distributed laminated cards containing these statements to employees.

> "Enrich public service through active listening, accurate interpretation, and swift dissemination of emergency and non-emergency calls to appropriate resources"

Our team was informed that employees were expected to learn the mission statement on the card and be able to recite them when asked by Center leadership. Employees were not asked to provide input into the vision and mission statements. There are no routine meetings between management and line personnel or any formalized, on-going, in-service training

Customer Service

Citizen satisfaction with services provided is not measured, monitored, tracked or evaluated for the emergency and non-emergency services provided. Citizen complaints are the primary source of citizen feedback. Periodic efforts are made to educate callers on the purpose and appropriate use of 9-1-1 and the non-emergency lines by Leon Emergency Management, and via the TPD web-site.

There is not currently any consistent effort in place to promote and enhance the image of the PSAP within the community. The PSAP does not have a formal plan to assist in managing its relationship with the media or a formal strategic plan that outlines a shared vision for the PSAP across the various stakeholder groups (e.g., Police, Fire, Sheriff, and EMS).

The PSAP does have a formal Quality Assurance (QA) program where supervisors are supposed to conduct a random review of logging recordings, and CAD incidents. A QA position has been established which has primary responsibility for tracking and monitoring performance. The position is designed to be rotated amongst supervisors every six months. However, due to staffing shortages, the QA program has not been implemented. Supervisor' have access to TPD BI Web reports that utilize CAD activity.

The proper use of 9-1-1 is explained when officers give presentations at schools and during citizen police academy training. There is not any information on the City of Tallahassee web-site explaining the proper use of the 9-1-1 system except on the Police Department page which outlines "Teaching Children How to Use 9-1-1". The City of Tallahassee Fire Department web-site does not contain any mention of the 9-1-1 system.

LEON COUNTY SHERIFF'S OFFICE DIVISION OF EMERGENCY AND 9-1-1 PROGRAM MANAGEMENT

The LCSO maintains the Division of Emergency Management office for Leon County and the 9-1-1 Program Management for Leon County per Emergency Management Interlocal Agreement as granted by the County Commission effective May 1, 1999.

The Emergency Management office is staffed by the Emergency Management Director and one Emergency Management Coordinator. They maintain the Emergency Operations Center located at the Leon County Jail and write/coordinate all Emergency Management plans for the County and City.

The Emergency Operations Center is in a secure location with approximately 50 seats to accommodate all necessary County and City leadership should the center be activated. Decision to activate is defined in the 2004 Comprehensive Emergency Management Plan (currently under revision). The center is well equipped to handle most disaster related events with sufficient telephony, and data communications services to support the center operations. Numerous visual displays (provided by a grant) provide the center director the flexibility to transfer local information to a large screen for presentations, and information dissemination. The center also maintains two positions tied to the Sheriff's 9-1-1 center for ancillary support to the center operations when activated. A logging and recording system is tied to these positions and subsequently the EOC during activation. Emergency Management maintains a logging and recording system that captures all City and County 9-1-1 call information. The logging recorder is used on a daily basis by 9-1-1 staff for response to subpoenas, public records request and to monitor discrepancies in call handling and routing among PSAPs. Each PSAP also maintains their own logging and recording system for their non-emergency phone lines and radio talk groups.

The Emergency Management Director is augmented by the 9-1-1 Program Management staff consisting of one 9-1-1 System Manager and a staff of four personnel (three positions filled and the GIS position is vacant). The 9-1-1 staff maintains the coordination requirements as specified in Florida Statute Chapter 365 – Use of Telephones and Facsimile Machines. The 9-1-1 System

Manager oversees the collection, reporting and distribution of the wire line surcharge pursuant with the Florida Statute. The manager oversees the purchasing of equipment and payment for services directly related to the 9-1-1 services of the county and city.

The 9-1-1 Program Management staff is also dedicated to support the emergency management Director and the EOC operations when required.

STANDARD OPERATING PROCEDURES

New employees at both PSAPs are provided a set of Communications Center SOPs during training. All LCSO terminals have access to the Sheriff's Office Intranet on which employees can view Communications SOPs and Sheriff's Office General Orders in Adobe PDF format. Supplementing the TPD and LCSO Standard Operating Procedures are SOPs developed by the following support offices.

Management Oversight Committee Standard Operating Procedures

The 800 MHz System Manager is responsible for the operation and maintenance of the 800 MHz Trunked Simulcast Radio System ("TSR System"). The City and County entered into an Agreement to establish basic parameters relating to use of the TSR System; the TSR System User Agreement, and created a Management Oversight Committee (MOC) composed of City and County Public Safety leadership. The MOC jointly developed approximately 16 SOPs. Our team found that as PSAP business processes changed over time, each PSAP developed their own SOPS. The MOC was absorbed by the new PSCB and the stakeholders have not met for more than a year to discuss or develop SOPs.

E-9-1-1 System Standard Operating Procedures

The Leon County Sheriff's Office Division of Emergency Management maintains the 9-1-1 emergency telephone system and has developed a set of operational and administrative Standard Operating Procedures. The SOPs were updated in 2005 after the new system was implemented and these changes were approved by 9-1-1 Operations Committee June 6, 2005. However, due to an oversight the dates were not changed. This has been corrected and the new SOPs will be distributed by April 1st.

The 16 SOPs cover such topics as "Call Takers Uniform Answering Statement", "Primary or Secondary PSAP Failure or Shutdown", and "Emergency Notification Procedures". These SOPs were developed in accordance with Section 3.03 of the SOP Table of Contents which states as follows:

> "Representatives from the five PSAP's will form an Operations Committee. The Committee will develop Standard Operating Procedures (SOP's) to ensure that the daily operation of the Leon County 9-1-1 Emergency Telephone System is in accordance with the Design Plan. The System Director will address suggestions/requirements of the Public Safety Agencies that provide emergency response services"

The 9-1-1 SOPs establish performance standards that mirror State standards.

NCIC/CJIS
The Terminal Agency Coordinator (TAC) is the assigned "contact person" required by the Federal Bureau of Investigation. Each agency having a NCIC/CJIS computer terminal must appoint a TAC. The four major TAC responsibilities, according to the FBI are:

a. to ensure compliance with NCIC and state policies and regulations;
b. to be the on-the-scene expert in policy and procedures;
c. to maintain liaison with the state system manager (CTA);
d. and to provide input into the state and national systems.

During design and development of the call center facility, the agency's F.B.I. Criminal Justice Information System (CJIS), Terminal Agency Coordinator (TAC) will need to work closely with the call center design team and the Florida Department of Law Enforcement (FDLE) to ensure that all security standards are met for the proposed location of all NCIC/CJIS capable terminals. The County TAC, has been in contact with the FDLE regarding these requirements

MUTUAL AID AGREEMENT
Cooperation between the LCSO and TPD in law enforcement matters is governed by a Mutual Aid Agreement that was updated July 18, 2006.

The Mutual Aid Agreement recognizes that it is in the best interest of the citizens and law enforcement agencies to extend mutual aid in times of need. The agreement has been crafted with an emphasis on the Sheriff's status as the chief law enforcement officer in Leon County (with law enforcement jurisdiction, power, and authority within both the incorporated and unincorporated areas of Leon County) and the imposition of strict limitations on City police activity within the unincorporated areas of Leon County. The following information describes current law enforcement cooperation under the mutual aid agreement.

LCSO Deputies have law enforcement authority throughout the County. There are eight Uniform Patrol Zones (Zones) established within the County, two of which are within the City of Tallahassee. Four Sheriff Deputies are assigned to the two zones within the City of Tallahassee. They primarily monitor the LCSO radio and their calls for service come from the LCSO dispatcher. Secondarily, they monitor the City's radio channels, as all deputies do. Deputies respond to emergency calls for service within their zone that are dispatched by the City. In the event that a TPD officer who lives outside of the City is responding to work and they come across an incident that requires police action, the LCSO expects that the officer will respond to the situation, stabilize it, and await the arrival of LCSO.

The Mutual Aid Agreement dictates that "In the absence of statutory authorization, a City of Tallahassee police department officer has no power or authority to act as a police officer in any part of Leon County located outside the corporate limits of the City of Tallahassee, and any such action by the officer would be subject to review by the sheriff as if were the action of a private citizen."

Section Two of the Mutual Aid Agreement describes the "procedure for requesting/rendering assistance". The procedure requires that the agency requesting or rendering assistance must

notify the other agency at which time the authorized agency representative evaluates the situation and available resources, consults with a supervisor if necessary, and then renders assistance in a "manner he/she deems appropriate".

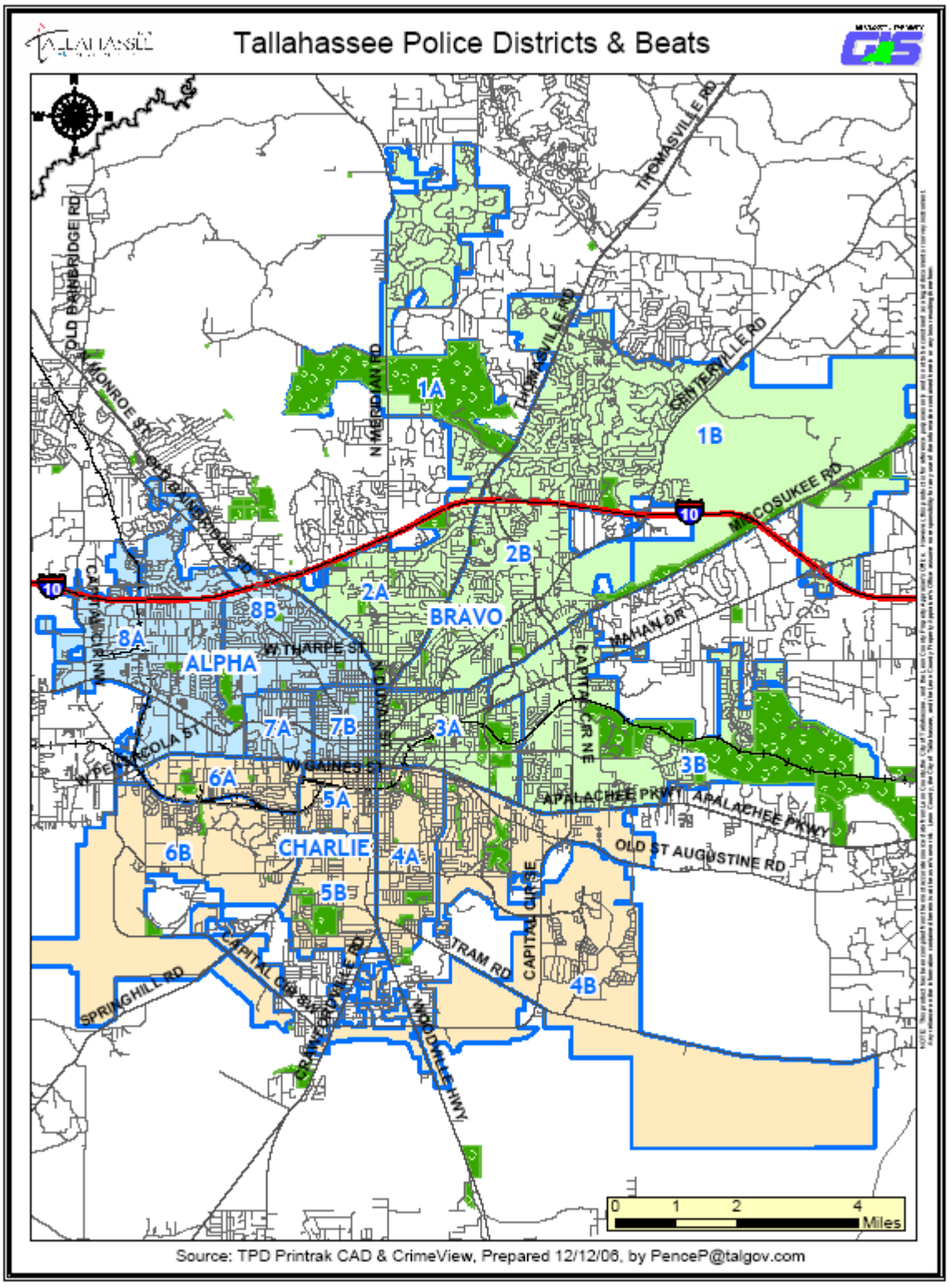
Exceptions to Section Two are made in Section 3.4 as they apply to a City police officer who is in the unincorporated areas of Leon County on routine business or traveling through the unincorporated areas on their way to work. In such situations, should a City officer witness; a Deputy in need of emergency assistance, "a forcible felony (as defined by Section 776.08, F.S.), a crime of violence against a person, or ay other crime requiring law enforcement intervention, the officer is empowered to take such law enforcement action as is immediately necessary to protect the victim(s) of the community from the perpetrator without first obtaining permission from the Sheriff". "Notification to the Sheriff must be made as soon as practicable after the situation has stabilized." The section also states that the section "is not intended to confer general authority on the police department to send an officer who is not in close proximity, or specialized units, to the scene". The officer is required to "immediately" relinquish control of the incident when the first deputy arrives on the scene.

Another important exception to the limitation on City officers to respond to emergencies is noted in Section 3.4.3, which allows "an officer, while monitoring the Sheriff's radio channel, hears an emergency call for service being dispatched to a deputy and the officer is in an area that would allow him/her to provide an immediate response necessary to render aid, the officer is empowered to provide a response in the unincorporated areas of Leon County without first obtaining permission from the Sheriff." Under such circumstances the officer is required to first notify their communications center who shall then immediately notify the sheriff's communications center.

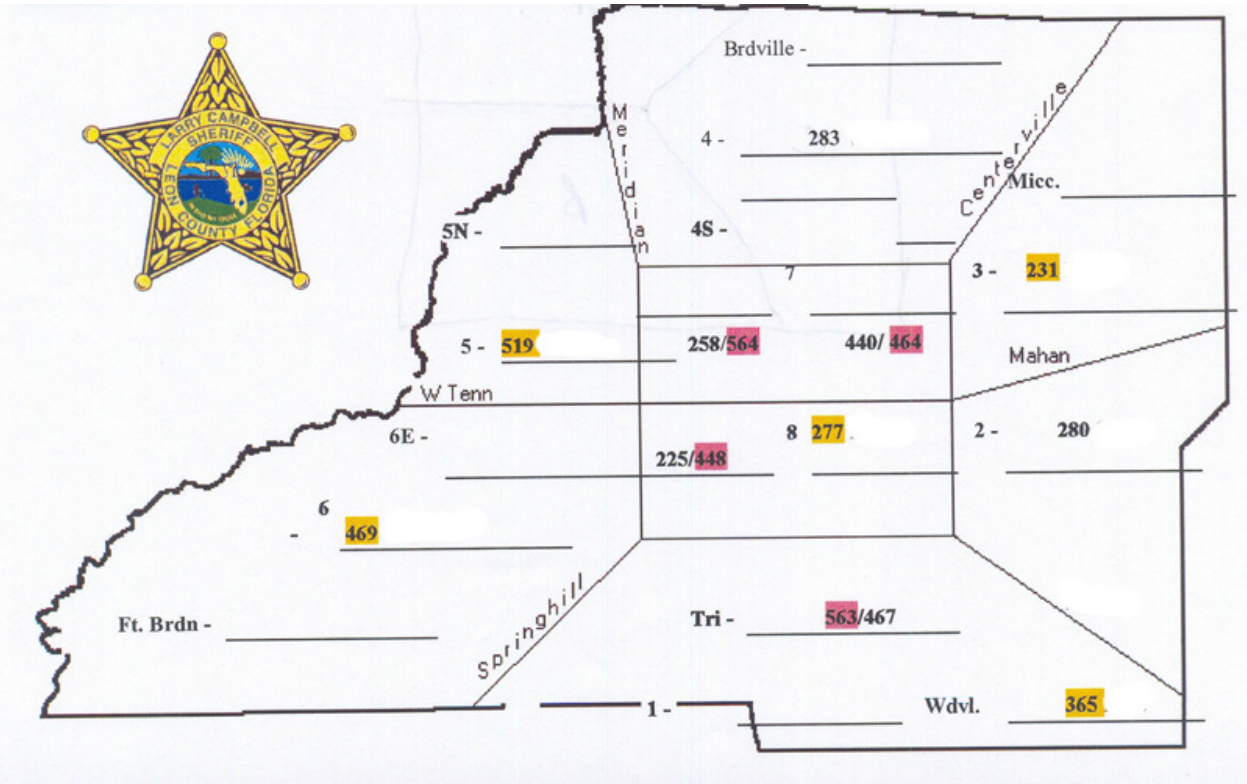
Section 4.1 describes command and supervisory responsibilities when mutual aid is undertaken and Section 4.2 describes the process in place for handling any complaints that arise as the result of a cooperative effort.

LAW ENFORCEMENT RESPONSE AREAS

The TPD maintains three police districts throughout the City in order to effectively deploy its resources. There are eight beats for the entire city. Each beat has a sub-beat (A and B). Example: 1A, 1B, 2A, 2B, and so on. TPD officers patrol and respond to calls for service only within the City limits. The white areas of the below map indicate the unincorporated areas of Leon County that the TPD does not patrol or routinely respond to. TPD officers in the field do not routinely monitor LCSO channels. The below map illustrates the geographic location of all beats and sub-beats and geographic areas assigned to each of the three TPD dispatch channels (Alpha, Bravo, and Charlie).


Tallahassee Police Districts & Beats
1A
1B
2A
2B
3A
3B
4A
4B
5A
5B
6A
6B
7A
7B
8A
8B
ALPHA
BRAVO
CHARLIE
MERIDIAN RD
THOMASVILLE RD
CENTERVILLE RD
MICCOSUKEE RD
APALACHEE PKWY
OLD ST AUGUSTINE RD
TRAM RD
SPRINGHILL RD
WOODVILLE HWY
CAPITAL CIR NE
CAPITAL CIR SW
MONROE ST
W THARPE ST
W GAINES ST
W PENSACOLA ST
0 1 2 4
Miles
Source: TPD Printrak CAD & CrimeView, Prepared 12/12/06, by PenceP@talgov.com

The LCSO maintains 8 patrol zones (areas) throughout the incorporated and unincorporated areas of Leon County. Two LCSO units are assigned to each of zones 1, 4, 5, 7, and 8, three units in zone 6, and one unit is assigned to each of zones 2 and 3. The below map illustrates the geographic location of all patrol zones.



USE OF 10-CODES ON THE RADIO

Ten-codes, properly known as ten signals, are code words used to represent common phrases in voice communication, particularly in radio transmissions. The codes, developed in 1937 and expanded in 1974 by the Association of Public Safety Communication Officials (APCO), to allow for brevity and standardization of message traffic. They have historically been widely used by law enforcement officers in North America, although the trend is away from their use in recent years with more departments discouraging the use of ten-codes and encouraging "clear" or plain language communications[17].

Both the LCSO and TPD rely on the use of numerous 10-Codes, dispatch codes and disposition codes for radio transmissions. The codes are so voluminous that officers have been issued three laminated cards to carry with them at all times which list all of the codes and their meanings. The City of Tallahassee Fire Department uses clear text. No 10-Codes are utilized and just a few other codes used. All other radio transmissions are conducted in standard language. Leon

[17] Wikipedia

County EMS follow the NIMS (National Incident Management System) recommendations for clear text. Only five 10-codes are allowed.

The City of Tallahassee & Leon County Sheriff, SOP#15, "800 MHz Communications System, Multi Agency Incident", became Effective April 19, 2000, after approval by the MOC Board. This Standard Operating Procedure addresses an incident involving multiple agencies as follows:

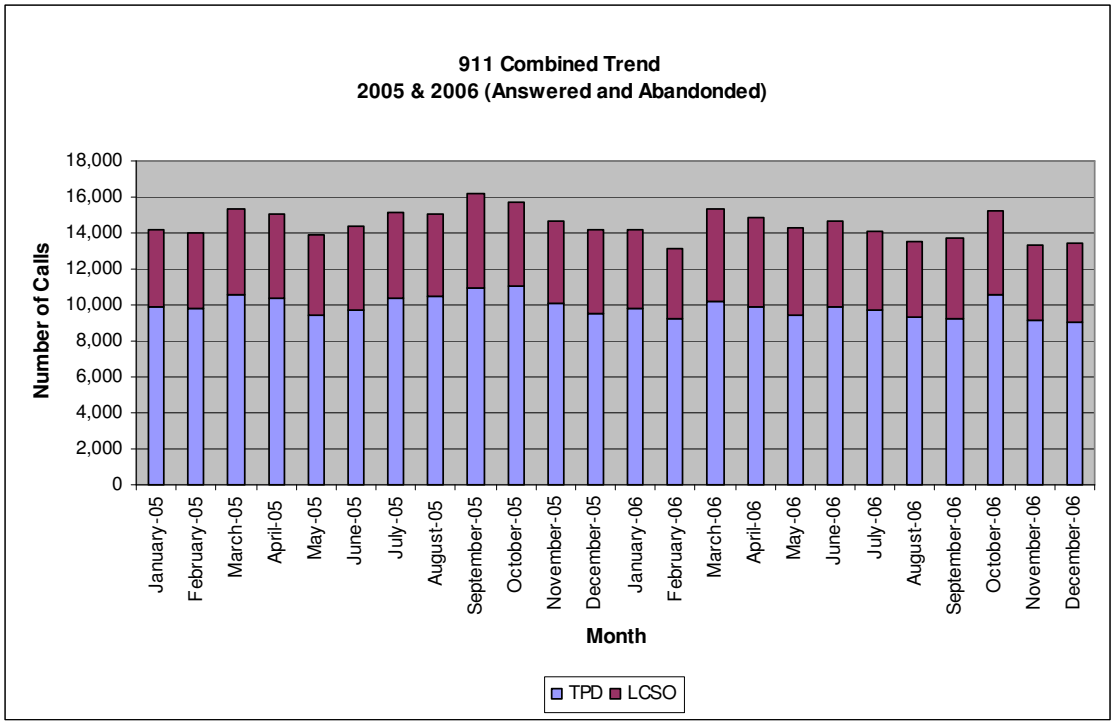
> Whenever an incident occurs involving multiple agencies there must be control and management of the communications resources.
>
> The originating agency will be responsible for all communications concerning the incident on their and all System Wide resources. The originating agency Incident Commander or Dispatch Supervisor will determine the assignment and use of talk groups until the incident is cleared or the originating agency stands down.
>
> The originating agency will assign multi agency personnel responding to the incident to physical locations at the direction of the Incident Commander. Communications for all coordination conversations, physical location assignments and tasks will be held only on those designated talk groups.
>
> During all situations of multi agency incident participation the conversations on the 800 communications system will be in "Plain English—clear text". No codes or signals will be utilized.

8.1.3 Service Level Documentation and Associated Metrics

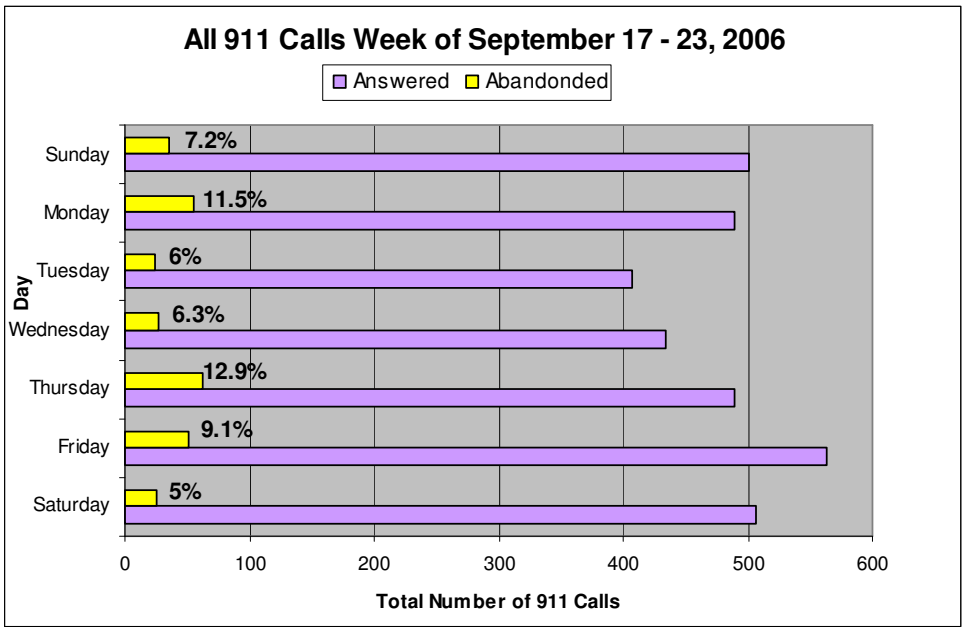
The following additional information was developed to support our analysis of PSAP activities.

9-1-1 Calls

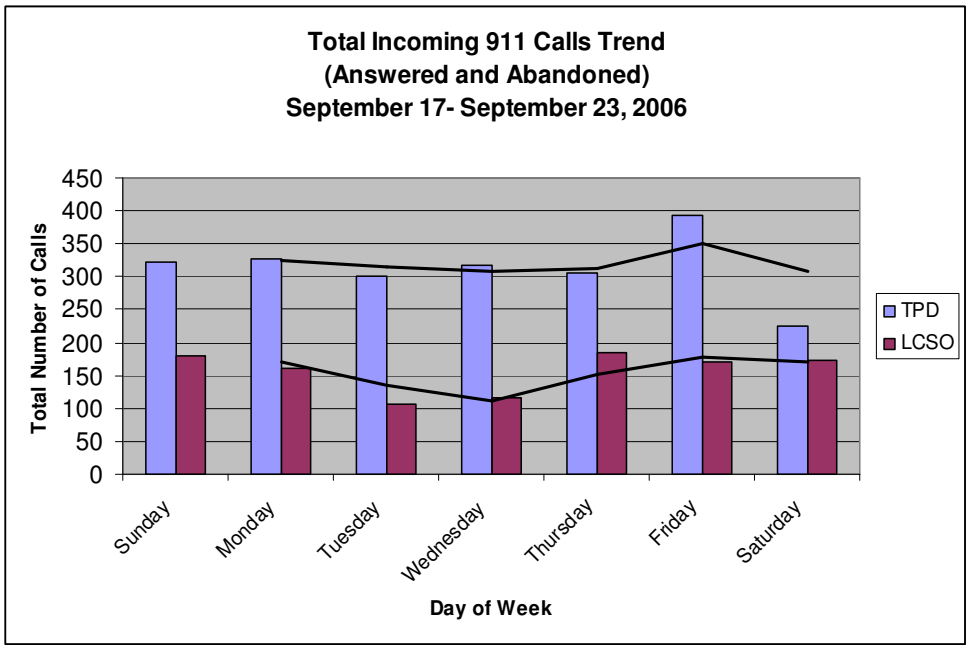
The below chart depicts the 9-1-1 monthly volume call trend for all calls, answered and abandoned, for 2005 and 2006. A trend of increased call activity is indicated in March and September/October of each year. In March this increase in call volume coincides with the Leon County Public Schools spring break. The September increase is attributable to seasonal influx of college students and the beginning of the college football season. October's increase is partially attributed to the North Florida Fair and the beginning of the High School football season and Halloween.



The one week period from September 17 to September 23, 2006, was sampled to obtain an accurate perspective of 9-1-1 call metrics during a busy period; when college students return to class. The average abandoned call rate for all 9-1-1 calls received during the sampled week was consistent between the two PSAPs; TPD, 8.3%, and LCSO, 8.5 %, for a combined average rate of 8.4% (below chart). The abandonment rate appears to be more closely correlated with call taker availability and performance than the number of calls received any given day. For example, Sunday experienced a 7.2% abandonment rate on 501 calls, while Thursday had a 12.9% abandonment rate on 490 calls. 9-1-1 calls were spread evenly across the days of the week except for Tuesday and Wednesday, which received the least number of 9-1-1 calls. Our analysis was unable to determine how many of the abandoned calls may have been dropped by the system prior to being answered. Although there are no standards for abandoned call rates, based on our experience, the 7.2% rate in 2006 is within the average range of many PSAPs.



The below chart illustrates how the PSAPs experienced similar 9-1-1 call volume trends during the same week. The horizontal lines illustrate the similar abandoned call trend between the two PSAPs.



Non-Emergency Line Calls

The number of non-emergency calls received at the PSAPs are important because calls received on the non-emergency number are often a significant driver of call taker workload.

Our team was initially informed by TPD staff that statistics on the number of calls received on the non-emergency phone line were not capable of being captured. Reportedly, when the City installed a new telephone system in 2005 this feature was not requested. Ultimately, however, the TPD staff was able to access and gather current and legacy data from the system. The same data could not be gathered for non-emergency calls to the LCSO PSAP.

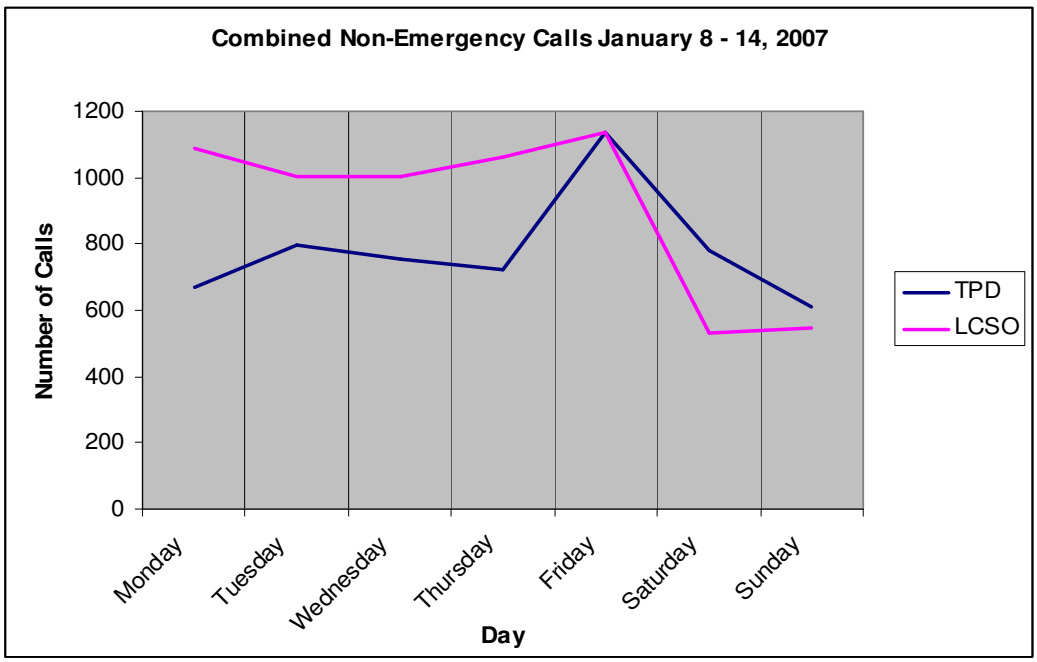
In order to assist our team with this element of our review, the LCSO PSAP Director instituted a manual tabulation of all incoming calls on the non-emergency line that were answered. Call takers kept manual tallies of all calls answered for the week of Monday, January 8 to Sunday, January 14, 2007. It should be noted that the tabulation includes only those calls which were answered; metrics are not available on abandoned calls. This information was then obtained from the 9-1-1 system for the same period of time, as represented in the below table.

LCSO Non-Emergency Line Call Count January 8 – January 14, 2007				All LCSO 9-1-1 Calls
Date	**Day Shift 0600-1800**	**Night Shift 1800-0600**	**Total**	**Total**
Monday 8	**866**	**221**	**1087**	**132**
Tuesday 9	**760**	**245**	**1005**	**117**
Wednesday 10	**780**	**223**	**1003**	**127**
Thursday 11	**772**	**298**	**1063**	**142**
Friday 12	**802**	**334**	**1136**	**124**
Saturday 13	**332**	**200**	**532**	**128**
Sunday 14	**07**	**241**	**548**	**138**
Total	**4619**	**1762**	**6381**	**908**
% of Daily Total	**72%**	**28%**		

Based on this data, 9-1-1 calls represented only **12.45%** of all calls received (Answered and abandoned 9-1-1 calls and answered non-emergency Calls) [908 is 12.45% of 7,249] for the review period. The LCSO also maintained statistics regarding the number of calls on the non-emergency line that resulted in calls for service being created during this reporting period. It was determined that 16% of all calls received on the non-emergency line during the reporting period resulted in a call for service being initiated.

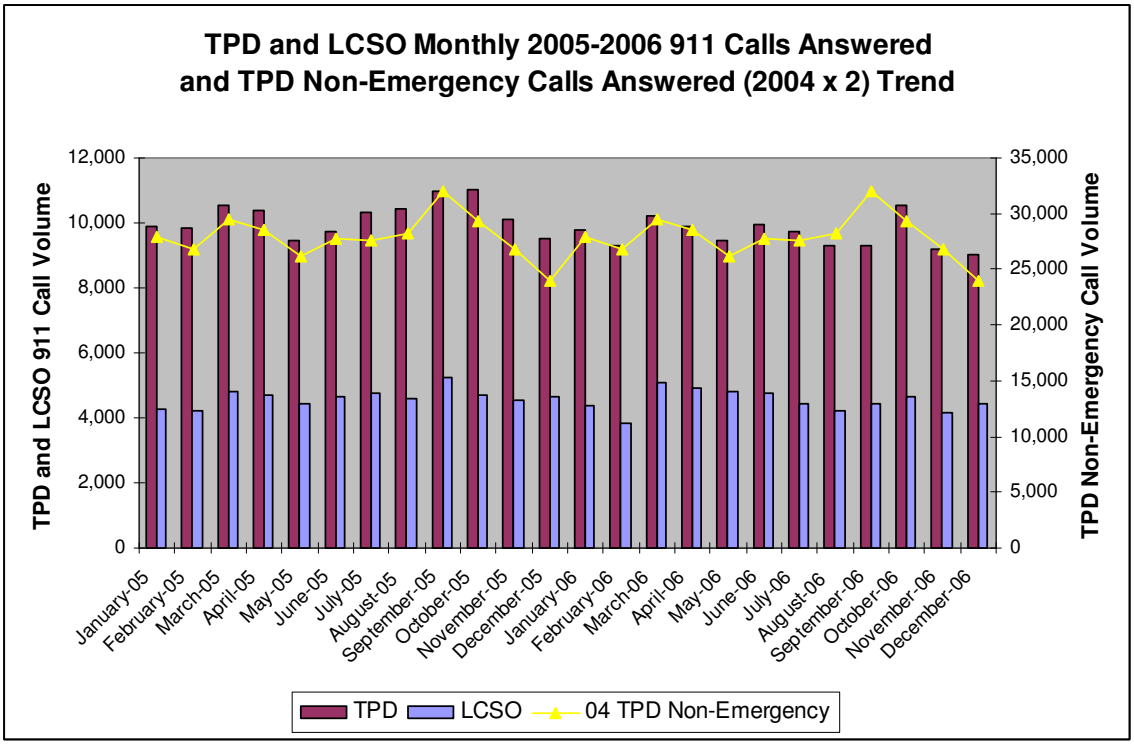
TPD Non-Emergency Line Call Count January 8 – January 14, 2007					All TPD 9-1-1 Calls
Date	Day Shift 0700-1500	Night Shift 1500-2300	Midnight Shift 2300-0700	Total	Total
Monday 8	278	264	125	667	298
Tuesday 9	449	272	75	796	328
Wednesday 10	400	251	104	755	289
Thursday 11	369	251	102	722	273
Friday 12	301	321	160	782	319
Saturday 13	127	258	210	595	332
Sunday 14	184	197	232	613	293
Total	2,108	1,814	1,008	4,930	2,132
% of Daily Total	43%	37%	20%		

Based on this data, 9-1-1 calls represent only **30.18%** of all calls received (Answered and abandoned 9-1-1 calls and answered non-emergency Calls) [2,132 is 30.18% of 7,062] for the review period. Both PSAPs had significantly lower call volumes on Saturday and Sunday as depicted in the below chart.



It is important to understand what correlation, if any, there is between 9-1-1 and non-emergency call volume in order to build call processing, staffing, and other recommendations. Transposing the 2004 Non-emergency monthly TPD call volume over the 2005 and 2006 combined 9-1-1

volumes (answered calls only) presents an accurate representation and illustrates a close relationship between 9-1-1 and non-emergency call volume in the below chart.



It should be noted that non-emergency call volumes are not likely to not increase in volume over time as much as 9-1-1 call volumes because many calls on the non-emergency line are interagency calls, which are more closely tied to agency staffing, which remains fairly consistent.

In order to determine the reasons why citizens and public safety officials call the LCSO non-emergency number, LCSO staff provided the below information:

Most Common Reasons People Call the Sheriff's Non-Emergency Number	
1.	**Interoffice Transfers (Switchboard Operations)** • Citizen Transfers (Jail, Warrants, CIB, Records, Human Resources, Off Duty Employment, etc.) • Personnel Transfers (Accounting, CIB, Human Resources, Shop, etc)
2.	**Unit Requests** • Warrants screens for the Jail • Deputies on special details • CIB requests for screens • Deputy Training Screens
3.	**Non-Emergency Law Enforcement Call for Service Complaints** • Calls where deputy responds • Lost cell phone case number requests • Gas drive off without tag
4.	**Teletype requests**

	• Entries and bolos • Criminal history requests • Administrative messages • Queries for tags, wants, and driver's license
5.	**Office Duty contact number requests by Sheriff's Office Personnel.**
6.	**Other Agency Calls** • Emergency response notifications • Requests for assistance from other LEO Agencies 1. Mutual Aid 2. K9 assist 3. Air Support Requests 4. Dive Team Requests 5. Swat Team Assistance • DCF Requests for Assistance
7.	**House/Business Checks**
8.	**Animal Control after Hours**
9.	**County Warning Point Calls**
10.	**Personal phone messages for Road Patrol**
11.	**Tow/Repo log notifications**
12.	**Citizen Requests for Information** • Directions • Road Closures • Weather Conditions • Other Agency Phone Numbers
13.	**Citizens who call because they need a friend. Calls are sometimes received from people who just want someone to talk with.**

According TPD staff, most calls received on the non-emergency line are from persons seeking directions, information on utility payments, legal advice, questions about what to do when their house is flooded after a storm, hurricane preparation questions, and many of the same requests for information noted in the previous table. Additionally, the TPD PSAP conducts after-hour notifications for most City agencies from Parks and Recreation to Public Works and Public Utilities.

The City maintains a 24/7 phone number [(850) 891-4YOU (4968) TDD – 711] for citizens to report power Outages/Repairs, Downed Power Lines, Water or Sewer Repairs, and Gas Repairs. The number is very difficult to locate on the City web-site and the number can be found on the second page of the local phone book. Its regular hours of operations are 8:00 a.m. to 5:30 p.m. When reporting certain types of utility emergencies after hours, the IVR system forwards the caller to a live representative. On our weekday test at 9:17 p.m., we received a message that all operators were busy and placed on hold. After two minutes a utility "control center" staff person answered the call and was prepared to provide any service needed.

Call Transfers

Because the dispatch of County and City public safety service providers are divided between two PSAPs, many calls are transferred between the PSAPs.

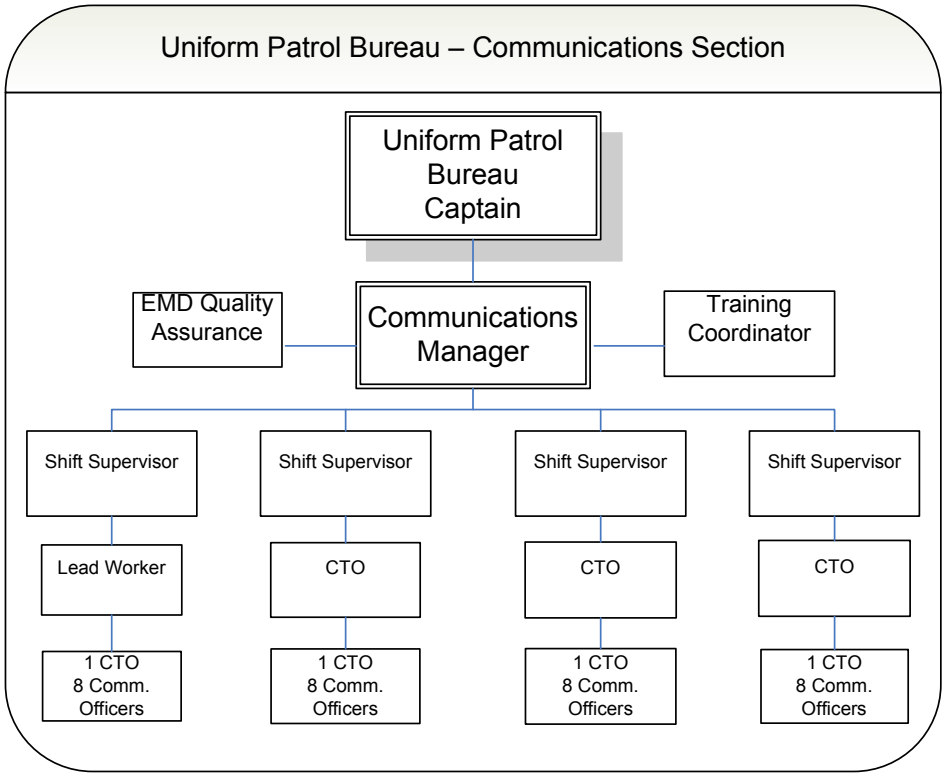
In 2005, the TPD transferred 12,033 EMS calls to the LCSO PSAP.
In 2006, the TPD transferred 12,579 EMS calls to the LCSO PSAP.

In 2005, the LCSO transferred 1,149 Fire calls to the TFD at the TPD PSAP
In 2006, the LCSO transferred 1,412 Fire calls to the TFD at the TPD PSAP.

In 2006, the TPD transferred 2,620 LCSOSEC calls to the LCSO PSAP. These are calls where a caller specifically asks for other County services or it turns out to be a call for County personnel or services.

8.1.4 Personnel Practices

LEON COUNTY SHERIFF'S OFFICE PSAP
The Communications Center reports to the Uniform Patrol Bureau of the Law Enforcement Division and is overseen by a civilian director with support from a uniformed Lieutenant.



Communications officers dispatch both emergency and non-emergency calls to Law Enforcement deputies and Emergency Medical Services. Paramedics and EMS's have pagers that receive information regarding their calls, but are also dispatched over the radio. All communications officers are trained as call takers, and Law Enforcement and EMS dispatch.

The Center has an authorized budgeted staff of 43 as follows:

Position	Authorized	Actual	Deficit
Communications Manager	1	1	0
Shift Supervisors	4	4	0
Lead Workers	4	4	0
Communication Officers	32	28	4
Training Coordinator	1	1	0
EMD Quality Assurance	1	1	0
Total	43	39	4

The following tables illustrate call taker and dispatcher deployment by tour of duty. As can be seen, call taker deployment is fairly consistent on both 12-hour tours of duty.

LCSO Call Taker Deployment by Tour of Duty		
Day of Week	0600-1800	1800-0600
Sunday	5	4
Monday	5	4
Tuesday	5	4
Wednesday	5	4
Thursday	5	4
Friday	5	4
Saturday	5	4
* Actual number assigned/working as call takers. One lead worker and one supervisor are included in the Call Taker and Dispatcher staffing levels.		

LCSO Dispatcher Deployment by Tour of Duty		
Day of Week	0600-1800	1800-0600
Sunday	4	3
Monday	4	3
Tuesday	4	3
Wednesday	4	3
Thursday	4	3
Friday	4	3
Saturday	4	3

Employees at the LCSO have the following roles and responsibilities.

Communications Manager
The role of the Communications Manager is to research new equipment/systems technologies, Identify Communications needs in terms of equipment and staffing, make recommendations to superiors regarding new/upgrade equipment, generate budgetary proposals, direct procurement/installation/maintenance/training of new equipment, conduct progressive discipline, conduct annual employee performance evaluations, review time sheets and leave requests, assist superiors in making decisions on issues where no guidelines or policies are present, respond to citizen and community needs and conflicts, resolve conflicts among personnel, assign and direct subordinates, motivate staff and fellow employees, implement changes and new programs as directed, inform superiors of events and activities in progress, counsel employees to improve work productivity, review personnel evaluations, liaison with other agencies and officials, provide info to staff regarding law and policy change, monitor monthly FCIC validation process, conduct on the job training.

EMD Quality Assurance
The role of the EMD Quality Assurance Coordinator is to generate communications reports, inform superiors of events and activities in progress, instruct new employees on the agency mission/goals and the accreditation process, develop/update accreditation proof of compliance checklist, manage the accreditation process/function, resolve QA discrepancies/deficiencies, Identify QA discrepancies / deficiencies, conduct feedback for EMD performance, maintains EMD quality assurance files, conduct call analysis for EMD calls, identify EMD training needs and coordinate with the Training Coordinator for on the job training and classroom training.

Communications Training Coordinator
The role of the Communications Training Coordinator is to supervise the F.T.O. program, develop and maintain a system for maintaining appropriate records, schedule I in service classes, maintain and update personnel training files, notify employees as to certification status, notify employees of class/course status, conduct classroom training, conduct on the job training, verify instructor certification, develop maintain and update training lesson plans, generate weekly FTO observation reports, maintain files, develop and maintain lesson plan file.

Communications Shift Supervisors
In addition to supervisory roles, the Communications Supervisors also work call taking / dispatch positions. Their responsibilities include: processing wrecker requests, motivating staff and fellow employees, inform superiors of events in progress, counsel employees to improve work performance, provide leadership on employee assignments, conduct on the job training, prepare cassette recordings, track and monitor deputies, route calls to proper authority, respond and request assistance from other agencies, receive and enter complaints in LEO and EMS CAD systems, process extra protection requests, operate telephone consoles, operate NCIC/FCIC, Operate local CJIS computer, operate 9-1-1, dispatch deputies and ambulances to calls for service, assist and coordinate emergency assignments, conduct progressive discipline, conduct annual employee performance evaluations, review time sheets and leave requests, assist supervisors in making decisions where there are no guidelines or policy, resolve conflict among personnel, assist and direct subordinates.

Communications Lead Workers

Communications Lead Workers are supervisor assistants. They assist the supervisor with supervisory duties as listed above and work as communications officers (call takers and dispatchers) during their normal tour of duty. Some of the Lead Workers have additional responsibilities as Communications Training Officers.

Communications Officers

The role of the Communications Officers includes processing wrecker requests, informing superiors of events in progress, tracking and monitoring deputies, routing calls to proper authority, responding and requesting assistance from other agencies, receiving and entering complaints in LEO and EMS CAD systems, processing extra protection requests, operating telephone consoles, operating NCIC/FCIC, operating the local CJIS computer, operating 9-1-1, dispatching deputies and ambulances to calls for service, and operating radio consoles.

The LCSO holds law enforcement accreditation through Commission for Florida Law Enforcement (CFA) and corrections accreditation through the Florida Corrections Accreditation Commission (FCAC). The CFA maintains Communications Center specific guidelines that must be met.

Selection and Hiring

The LCSO current selection process begins with advertising vacancies in various print and on-line employment services including local newspapers, trade association publications; job related web-sites, the County on-line career employment web-site, and occasionally through job career recruitment at job fairs and on the local universities.

An applicant interested in the vacancy will complete the LCSO employment application. Following a review for qualifications, the LCSO Human Resource section will then conduct routine background and financial checks, schedule the Minnesota Multiphasic Personality Inventory (MMPI) testing, schedule a psychological examination, and contact references. The applicant's package will then be forwarded to the LCSO Communications Center for review and the applicant is interviewed by LCSO Communications Center leadership. The applicant will be required to complete an on-line evaluation for dispatchers called 'CritiCall' (CritiCall® Pre-Employment Dispatcher/Calltaker Skills Testing). CritiCall tests the applicants reading comprehension, reasoning skills, and typing ability. A TB Tine Test and drug screening are also required of the applicant. The LCSO Human Resource section will, if the applicant has completed and satisfactorily passed all requirements for employment, complete an offer for employment.

An applicant is briefed during the hiring process about shift work, seniority, benefits, and retirement systems of the county. The newly hired employee is entered immediately into training and serves a 12 month probationary period. During this period they must achieve certain levels of proficiency to be retained as an employee. These levels are explained in the Training section below.

Training

The LCSO Communications Center has a very robust training program. It is maintained internally incorporating LCSO General Orders, internal policies and procedures, State of Florida requirements, and any Federal Requirements dictated by various Federal government departments and agencies.

The training program consists of basic dispatcher training followed by on-the-job training with an assigned veteran dispatch trainer in operations. The new employee is given an orientation and training guide they will utilize throughout their training. All training is focused on the available reference guides and information directly used by the dispatcher. Training begins with 4-5 weeks of basic phone (call-taking) followed by: 2 weeks teletype; 3-4 weeks of Radio & teletype; 4 weeks of Warrants and Primary Radio. The Communications Center Training Coordinator will schedule the employee for 24 hour classroom EMD training and certification provided by the company – Priority Dispatch. Upon completion of the classroom EMD certification, the individual receives HIPAA and CPR training. Then the individual receives 6 weeks of on-the-job EMD training and must be certified to the National Academy of Emergency Dispatch standards. The employee must complete the EMD certification for continued employment.

All training documentation is maintained in a computer based training system identified as ADORE' (Automated Daily Observation Reports). Daily Observation Reports (DOR) are completed by the trainer to document the new employee's progress. These reports are extractable for training documentation and progress.

If during the training process the employee does not or cannot complete the levels of training and certifications identified in the training plan, the new employee is terminated per LCSO policy.

Additional and refresher training for all communications center employees are conducted monthly usually in an over-time status not to interfere with shift operations. This status and its budget impact will be addressed during the compensation review when all documents are available.

Promotions

The LCSO Communications Center has limited promotion opportunities. Three positions are listed above those of the communications officers – Shift Supervisor, Training Coordinator, and Center Director.

Retention

The below table displays the LCSO Attrition Data from 2001-2006.

Leon County Sheriff's Office Communications Officer Attrition 1/1/2001 - 12/31/2006					
Year/Month	New Hires	Terminated	Resigned	Retired	*Departmental Attrition Rate
2001 Totals	10	2	7	0	21.00%
2002 Totals	9	2	2	0	10.00%
2003 Totals	13	0	5	0	11.90%
2004 Totals	13	2	5	0	16.70%

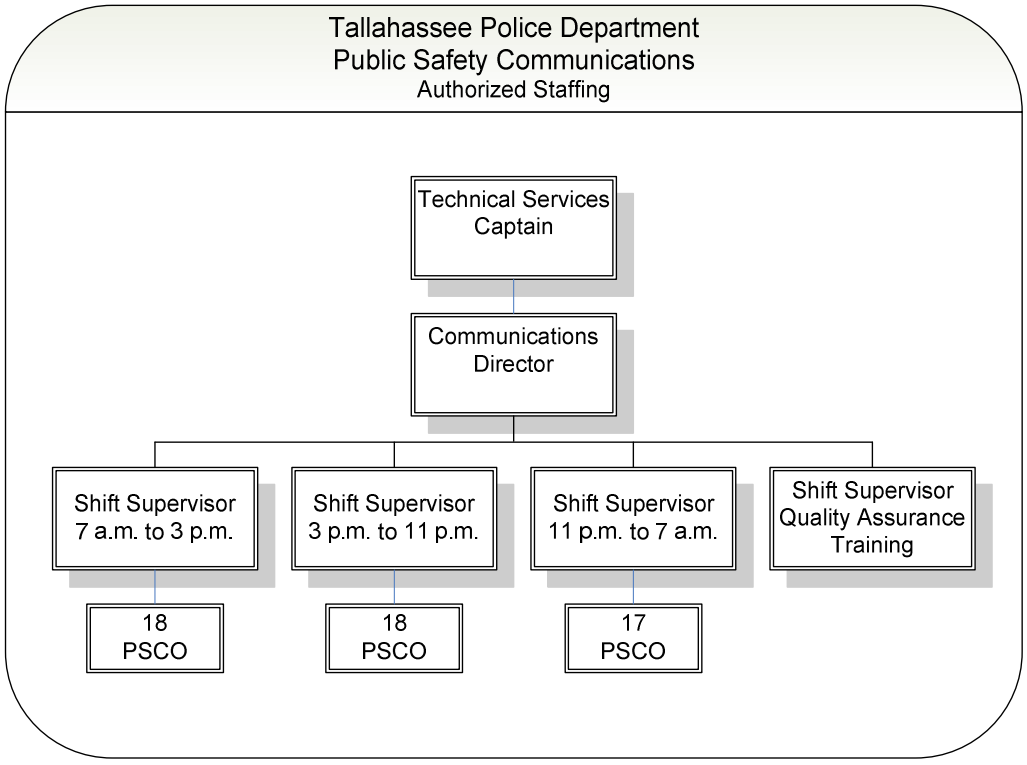
2005 Totals	13	1	6	0	16.70%
2006 Totals	8	4	6	0	23.80%
Grand Totals	66	11	31	0	16.68% ~
* Based upon Total Communications Officers Positions that Year ~Avg. Annual Attrition Rate					

Compensation and Benefits

Information required to be considered in this section of our report is addressed in Chapter 5.2 of this report.

CITY OF TALLAHASSEE POLICE DEPARTMENT PSAP

The TPD Communications Center reports to the Technical Services Division of the TPD and responsible for receiving and dispatching law enforcement calls for service within the City and Fire Department calls for service throughout the County. The Center is authorized 1 Director, 7 Shift Supervisors, and 53 Public Safety Communications Center Officers (PSCO). There are currently seven vacant positions; 1 Shift Supervisor and 7 PSCO vacancies. Quality Assurance duties are shared and rotated between Shift Supervisors every six months.



TPD PSAP Staffing			
Position	**Authorized**	**Actual**	**Deficit**
Director	1	1	0
Shift Supervisor	7	6	1
PSCO	53	46	7

PSCO's are required to attain four different skill sets during the course of their employment: Police Dispatch, Fire Dispatch, Teletype (Florida Crime Information Center (FCIC) and National Crime Information Center (NCIC), and Call Taking. This arrangement provides maximum operational flexibility and provides the staff a variety of assignments and sufficient resources for relief. The workforce is scheduled around three, eight hour tours of duty, each staffed with a minimum of 11 PSCOs.

TPD PSAP Minimum Mandatory Staffing	
Fire Dispatch	2
Police Dispatch	3
Call Takers	4
Teletype	1
Relief	1

As with most call centers, staffing shortages periodically arise. The TPD staffs any shortages by soliciting volunteers for overtime compensation, holding staff beyond their regular tour of duty for overtime compensation, or utilizing PSCC administrative staff, who are also trained in the call taking discipline. TPD Communications Center personnel are City employees with all position advertising, recruiting, and hiring managed by the TPD Employee Resource Section in accordance with City policies.

The following tables illustrate call taker and dispatcher deployment by tour of duty. As can be seen, call taker and dispatcher deployment is consistent across all three tours of duty.

TPD Call Taker Deployment by Tour of Duty			
Day of Week	0700-1500	1500-2300	2300-0700
Sunday	4	4	4
Monday	4	4	4
Tuesday	4	4	4
Wednesday	4	4	4
Thursday	4	4	4
Friday	4	4	4
Saturday	4	4	4
Overall Average #	4	4	4

TPD Dispatcher Deployment by Tour of Duty			
Day of Week	0700-1500	1500-2300	2300-0700
Sunday	6	6	6
Monday	6	6	6
Tuesday	6	6	6
Wednesday	6	6	6
Thursday	6	6	6
Friday	6	6	6
Saturday	6	6	6
Overall Average #	6	6	6
Dispatcher deployment: 3 Police, 2 Fire, 1 Teletype			

The primary position responsibilities are as follows;

Director, Public Safety Communications

Conducts supervisory and technical work involving all phases of planning, directing and operating the Communications Center as it relates to public safety and general government calls for service. Plans, organizes, directs and trains employees in operational activities in the Communication Center. Coordinates communication activities with other sections and divisions in the department and provides technical assistance as needed. Develops and improves the internal organization of the center; develops operational procedures and insures needed personnel and equipment are obtained and effectively used. Serves as an advisor on public safety communications issues to police superiors and other agencies, coordinates efforts to expand and update programmed response dispatching procedures; updates emergency procedures and techniques. Conducts and attends meetings to improve operating techniques. Serves on various committees as needed and prepares the Communications Section budget. Directly supervises shift supervisors to accomplish the goals of the unit. The Director recommends the hiring, transfer, advancement, grievance adjustment, discipline and discharge of assigned staff.

Shift Supervisor

Responsible for specialized and supervisory work involved in the direction and operation of the communications center on an assigned shift. The work includes responsibility for assignment and coordination of the routine activities of the center and the training of employees in the operations of the communications system. Plans, schedules, assigns work positions and assists in the training of Public Safety Communications Operators. Supervises and monitors all activities and personnel of the Communications Center during assigned shift. Makes recommendations on hiring, transfer, and discipline of subordinates and conducts performance evaluations.

Public Safety Communications Operator

This is specialized work receiving, screening, prioritizing, and relaying information over a communications system involving multiple lines and channels of transmitting and receiving. Works an assigned rotating shift, operates a sophisticated communications system which allows contact with the public, police officers, firefighting personnel, other emergency service agencies, and support departments. Answers fire calls for the entire County area and dispatches to both City/County and volunteer fire stations as well as maintaining a backup card system of all fire

run areas and hydrant locations. Operates and monitors several radio frequencies for dispatching police officers and firefighting personnel which maintains the status of these personnel on various frequencies, their location, assignment, and safety. Answers incoming phone calls on non-emergency lines including the Telephone Device for the Deaf (TDD) as they relate to routine or emergency calls from citizens.

The TPD is accredited by the Commission for Florida Law Enforcement Accreditation and the Commission on Accreditation for Law Enforcement Agencies CALEA, which has specific standards that apply to the PSAP.

Selection and Hiring

The TPD current selection process begins with advertising vacancies in various print and on-line employment services including local newspapers, trade association publications; job related web-sites, the city on-line career employment web-site, and through job career recruitment at job fairs and on the local universities.

An applicant interested in the vacancy will complete the city employment application. Following a review for qualifications, the TPD Employee Resource section will then conduct routine background and financial checks, schedule a polygraph examination, schedule a psychological evaluation, contact references, and conduct a typing test. The applicant's package will then be forwarded to the TPD Communications Center for review and the applicant is interviewed by TPD Communications Center leadership. The applicant will be required to observe and listen to a minimum of four (4) hours of 9-1-1 center activity which must be signed off before the applicant can be considered for employment. The applicant is then scheduled for drug screening. The TPD Employee Resource section will, if the applicant has completed and satisfactorily passed all requirements for employment, complete an offer for employment.

An applicant is briefed during the hiring process about shift work, seniority, benefits, and retirement systems of the city.

The newly hired employee is entered immediately into training. They are issued TPD polo shirts for the communications center. Issued polo shirts are worn on all shifts. A relaxed 'casual' day is provided weekly on Friday.

The employee has a six (6) month probation period. During this period they must achieve certain levels of proficiency to be retained as an employee. These levels are explained in the Training section below.

Training

The TPD Communications Center has a very robust training program. It's maintained internally, incorporating TPD General Orders, City of Tallahassee policies and procedures, State of Florida requirements, and any Federal Requirements dictated by various Federal government departments and agencies.

The training program consists of basic classroom dispatcher training followed by on-the-job training with an assigned veteran dispatcher trainer in operations. Aside from classroom training

for call-taking and dispatch operations, the new employee receives psychological counseling with emphasis on employee assistance programs, and family orientation to the job.

A new employee has 28 work days following classroom training to be upgraded to solo status on call-taking. Daily Observation Reports (DOR) are completed by the trainer to document the new employee's progress. Should a trainee not accomplish solo status within the 28 work day period. An evaluation of progress is completed and a determination to extend by 40 hours is made by the trainer and the center director. If the evaluation does not warrant the additional hours for training, the new employee is terminated per the TPD and City of Tallahassee policies. If the individual does not achieve solo status after being granted the additional time, they too are terminated per the TPD and City of Tallahassee policies.

A new employee, who achieves the initial call-taking solo status within the time-line of their training, will be trained in each of the three additional positions – teletype, law enforcement dispatch, and fire dispatch.

Additional and refresher training for all communications center employees are conducted monthly usually in an over-time status not to interfere with shift operations. This status and its budget impact will be addressed during the compensation review when all documents are available.

Promotions
The TPD Communications Center has limited promotion opportunities. Three positions are listed above those of the communications officers – Shift Supervisor, Training Coordinator, and Center Director.

Retention
At the time this chapter was prepared our team was awaiting additional information on this topic from the TPD.

Compensation and Benefits
Information required to be considered in this section of our report is addressed in the Chapter 4.2 of this report.

8.1.5 Technology

1.0 Introduction

This report presents a high-level overview of the core Computer-Aided Dispatch (CAD), Records Management Systems (RMS) and key related public safety systems and technologies currently in use within the jurisdictions of the City of Tallahassee and Leon County, Florida. Documenting these systems and their interfaces will provide the City and County with the following significant benefits:

- Provide a baseline architecture against which a migration plan to a target architecture may be plotted.
- More effectively plan for the implementation of a new integrated and/or consolidated CAD/RMS environment.
- Identify issues and decision points which need to be addressed to effectively define the target architecture.

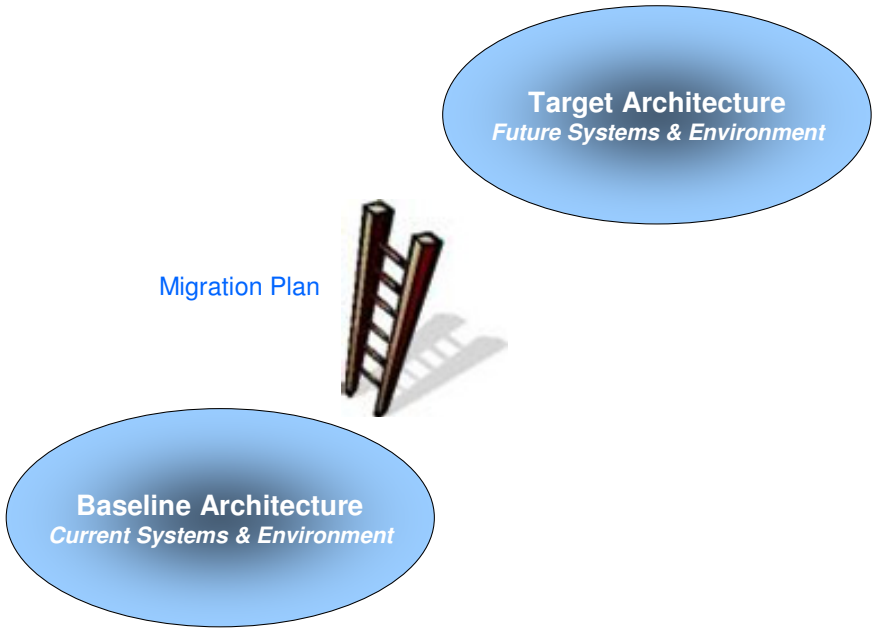


Figure 1. The Migration Plan lists the steps required to attain the Target Architecture from the Baseline Architecture.

The County and the City have identified public safety as one of their core priorities. Further, as the largest jurisdictions in the region as well as housing the state capital, there are a number of public safety capabilities that these agencies must possess. The target environment must reflect those realities and provide the foundation upon which a tightly integrated suite of public safety applications may be delivered.

1.1 Methodology

The information in this report was gained through a series of individual and group interviews and a review of technical documentation, where available, including network diagrams, equipment inventories, Requests for Proposals, and agency strategic plans.

The systems reviewed were primarily limited to those that directly support CAD/RMS functionality or have a current or future need to interface with those systems on a regular basis for the sharing of data. Certain future systems and technologies that are relevant to the

environment are also discussed as their implementations are being planned for either the near or mid-term future.

2.0 Overview

The City and the County each operate a Public Safety Answering Point (PSAP) – a location that receives and processes 9-1-1 calls for service. Each PSAP is supported by automated systems that interface with the Enhanced 9-1-1 (E9-1-1) telephone system, manage the intake of incident information, the dispatch of appropriate units and the long term storage of incident information for analysis and reporting.

The County's PSAP is located in and operated by the Sheriff's Office and dispatches units from the Sheriff's Office as well as ambulances from the Emergency Medical Services. The Sheriff's Office and EMS use separate CAD systems. The City's PSAP resides in and is managed by the Tallahassee Police Department. It utilizes a single CAD to support call taking and dispatch for both the Police and Fire departments.

As shown in the following graphic, this distributed PSAP environment can result in one 9-1-1 call for service being routed through two PSAPs, three CAD systems, two sets of dispatchers[18] and three RMS platforms as well as numerous ancillary systems that receive CAD data. This results in an inherent duplication of effort and the potential delay of providing fast and effective response to emergency events. As a result the joint City/County/Sheriff Public Safety Communication Board (the Board) embarked on planning for integrating or consolidating the two main PSAPs[19]. This report is part of that effort.

[18] Dispatchers within the LCSO PSAP are cross-trained, but are segregated by function in the radio room where the dispatching occurs.

[19] Additional call centers are operated by the Capitol Police, Florida State University and Florida Agricultural and Mechanical University. However, they do not directly receive 9-1-1 calls from the public.

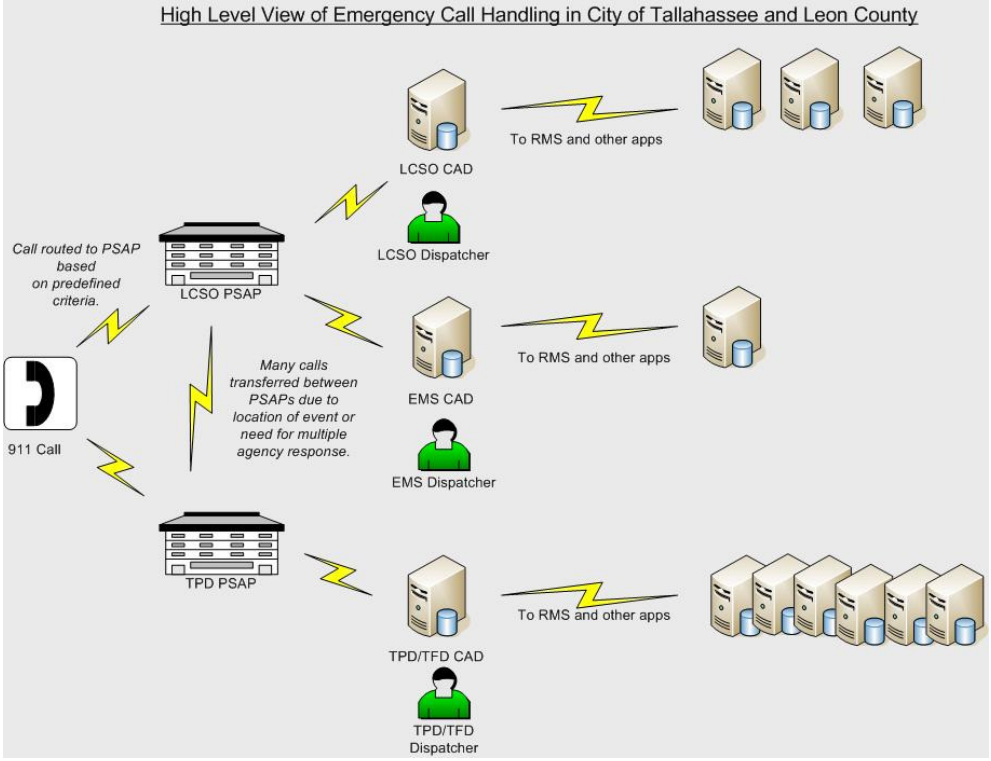


Figure 2. High level view of 9-1-1 call routing.

The public safety systems run by the City and County are substantially different in the technologies they employ and the level of customization that has been undertaken. At the same time there are some common components.

Additionally, two critical supporting components are inextricably tied to the baseline and target architectures and the ability to provide superior emergency response:

- The network environment, including both wired and wireless access modes, in which these systems operate
- The GIS environment

Both of these aspects of the public safety environment currently present minimal barriers (pending planned enhancements to the City network) to achieving the Board's goal of providing a first-class public safety IT capability.

3.0 Systems Review

3.1 E-9-1-1 System

The LCSO Department of Emergency Management (DEM) oversees the 9-1-1 telephony systems for all of Leon County. The system is E-9-1-1 Phase 2 compliant and 9-1-1 is on a separate LAN from the CAD systems at each PSAP. The system has remote monitoring and diagnostic capabilities. There is no Automated Call Distributor and the administrative lines are

on separate switches from 9-1-1. DEM maintains digital recordings of all 9-1-1 calls and is responsible for responding to requests for recordings.

Each PSAP utilizes one copper feed and has a T-1 line for wireless calls. Each has one entrance point to their facilities. A 100MB VLAN on the City and County networks provides connectivity with a T-1 running between each facility for redundancy. There are no ringdown circuits.

Each PSAP serves as a back-up to the other. Calls are automatically routed (defaulted) to other site when they are not answered within 15 seconds. Call taking is not entirely redundant, as TPD can not take EMS calls, and LCSO can not dispatch fire calls. The CAD application is not integrated into the 9-1-1 workstation and call takers use two separate keyboards.

The TPD PSAP has nine 9-1-1 Positions, 6 - primary call takers, 1 Supervisor (has dispatch capability also), and 2 Fire Dispatch which have 9-1-1. There are also 4 dispatch positions, which do not have 9-1-1 capability.

The LCSO PSAP has eight, 9-1-1 positions - 6 primary/EMS call takers, and 2 EMS dispatch/monitoring for EMS calls. There are also 3 dispatch positions which do not have 9-1-1 capability.

Both PSAPs utilize similar E-9-1-1 technology from CML/Plant Equipment. Both PSAPs are Phase II compliant for mobile phone location identification.

Both PSAPs also share a common Automatic Location Identification (ALI) database. Call routing to the PSAPs is location-based - if the location of an emergency call can not be automatically determined then the call is routed to the LCSO PSAP by default.

3.2 City of Tallahassee CAD System

System:	Premier CAD
Vendor:	Motorola
Database:	SQL Server
OS:	MS Windows
Main Servers:	Compaq Himalaya (CAD)
	Stratus (message switch)
	Open Query
	Decision Support System
	GIS/Advanced Tactical Mapping
	AVL
	Web Server
	HTE Field Reporting
	Motorola Reporting
Key Interfaces:	E9-1-1/ANI/ALI from CML/Plant

Netclock
Push to Talk radio ID
Zetron 25 fire station alerting
TMH
CJIS/NCIC/FCIC queries
AVL
GIS
Law Enforcement RMS
Fire RMS
Telestaff

The City's CAD system supporting call taking and dispatching for both Police and Fire departments is a Commercial, Off-The-Shelf (COTS) system from Motorola called PremierCAD[20]. PremierCAD is widely used throughout the nation and also in a number of foreign jurisdictions. Further, there are currently nine jurisdictions within the state of Florida who also utilize Printrak.

The City maintains the system in COTS format with no customization to its core functions or capabilities. It is however a highly configurable system so that jurisdictions may adapt its "look and feel" to suit their environment and business processes without altering the source code or database structure of the product itself. This minimizes the cost and difficulty of installing product upgrades.

The CAD and RMS operate on a bank of 23 servers located in the Computer Operations Room (COR) in Police Headquarters. The COR has multiple battery-operated Uninterruptible Power Supplies (UPS) as well as a diesel generator with an external tank for backup power. An Inergen fire protection system is in place to quickly extinguish any fires that might occur with minimal damage to the equipment.

High availability servers are dedicated for the CAD application itself as well as the message switch. The CAD operates on an HP/Compaq Himalaya server while a Stratus server is the message switch – each of these platforms is designed to provide "five nines" reliability, or 99.999% uptime. All other servers are rack-mounted Windows/Intel-based from Unisys. The majority of the servers are scheduled to be replaced by the end of March, 2007.

The CAD communicates directly or indirectly with a number of Motorola-based and third party applications and platforms. The Fire department uses Telestaff to conduct personnel/staffing management and this also produces their rosters within the CAD environment.

All police and fire vehicles possess mobile computers to support the Premier Advanced Tactical Mapping applications including vehicle location and recommended routing which is available on-map and via text directions. Multiple map layers are available such as a hydrant layer utilized by the fire department. Other mobile applications include field reporting, automated queries against multiple database, records management access and messaging. AVL-provided current

[20] The CAD also has EMS dispatching capability but it is not used.

location on the map display in the vehicle is server-based which results in a slight lag in posting the location. A browser-based CAD viewer is also available through the MDCs.

Both Police and Fire departments maintain mobile communications units/command vehicles. These are radio-based platforms without CAD functionality available locally.

The CAD and RMS environments are supported by 11 police personnel, 3 fire personnel and additional assistance from City and TLCGIS staff as required.

3.3 City of Tallahassee RMS Systems

Police

System:	InfoTrak RMS
Vendor:	Motorola
Database:	SQL Server
OS:	MS Windows
Servers:	Unisys WinTel platform

The Police RMS is provided via the Motorola Infotrak RMS system and is tightly linked to the CAD data. Data within the RMS is available in near real time including data input from electronic field reports via MDC. Infotrak Investigative Query (IIQ) version 5.5 is the front end application to conduct queries. Access to the RMS is available through the Intranet and through MDCs.

Fire

System:	Fire RMS
Vendor:	Sunpro
Database:	SQL Server
OS:	MS Windows
Servers:	Unisys WinTel platform

The Fire Department uses the COTS Sunpro Fire RMS product. This is a common product utilized by many fire departments and is integrated with all major CAD platforms. The department is currently in the process of upgrading this system. When complete, scheduled by March 15, 2007, the new environment will produce electronic NFIRS reporting and include a HIPAA-compliant EMS module, training module and a supply and inventory module with bar code support. Reporting will be accomplished through Crystal Reports version 8, which also represents an upgrade.

3.4 Ancillary Applications

Both City public safety agencies utilize software from the Omega Group, Inc. (http://www.theomegagroup.com) to provide advanced analysis and tracking of incident data via

a number of user-defined parameters. TPD uses CrimeView, while the FRD application is FireView. Both allow geo-based mapping and analysis of incidents via saved or ad hoc automated queries. The geo-engine of the applications is ESRI's ARC-GIS product which provides seamless compatibility with the County and City's GIS standards and existing environment (see below). CrimeView and FireView both operate on the reporting server and receive twice daily updates from the CAD.

3.5 Leon County CAD - Sheriff

System:	"LCSO CAD"
Vendor:	Lawrence and Associates
Database:	ISAM Files
OS:	Red Hat Linux, v9
Main Servers:	Dell PowerEdge, 1 active and 1 backup GIS/Document Imaging AVL BioKey Mobile Paging
Key Interfaces:	E9-1-1/ANI/ALI from CML/Plant Netclock JIS/CJIS/NCIC/FCIC queries AVL/Mobile GIS Paging Document Imaging

The Sheriff's Office uses a CAD application that was custom-developed by a local firm, Lawrence and Associates. It utilizes ISAM files to store the data and is written in the COBOL programming language. Additional users of this system include Tallahassee Community College, Suwannee County Sheriff's Office and a sheriff's office in Alabama.

One server, the 'active" one, handles CAD and RMS applications with a hot backup server on-line. The active server updates the backup server every 30 seconds so that should its use be required minimal downtime or loss of data would occur.

Additional tasks handled by the CAD server include wrecker and tows requests, funeral rotations as well as a financial and accounting application. All addresses, whether in the City or the County, are geo-verified by the CAD application.

Additional servers handle mobile interfaces and AVL, paging, GIS and document imaging. A total of eight rack-mounted servers are utilized for operations (including EMS) and they are housed in a dedicated computer/telephony room next to the dispatchers' office. UPS systems are in place to protect against power loss as well as a diesel generator with an external tank for backup power.

Workstations are typical PCs operating in terminal emulation mode, i.e. the "green screen" typical of mainframe-based applications.

AVL is currently not fully implemented. Vehicles have been outfitted with the necessary equipment and the location data is being transmitted back to the PSAP. However, it is not yet available to the dispatchers. A planned enhancement will provide map-based unit locations to the dispatchers. Use of location data for unit or routing recommendations is not planned at this time.

Mapping is also not fully implemented with the PSAP. The call takers' room and the dispatchers' room have the ability to view on a shared display the location information of one incident. Plans exist to introduce enhanced mapping functions to the dispatch environment.

A mobile report writing module is currently undergoing testing. It is based on an application written by the Jacksonville Police Department under a federal grant and is being made available to the Sheriff's Office at no cost.

The PSAP is typically staffed with four call takers and three dispatchers.
The CAD and RMS environments are supported by 6 LCSO IT staff at the PSAP with an additional position in the jail. An additional slot is expected to be filled in October.

LCSO IT staff state that the system has experienced less than six hours total downtime in over 10 years of operation.

3.6 Ancillary Applications

The LCSO CAD provides a nightly feed that supports the operation of a number of ancillary applications. LCSO IT staff have developed scripts in-house to allow single log-on to these applications for the appropriate personnel - the CAD system is considered the master employee list. These systems are generally available through the LCSO Intranet and include a Policy Manual, Personnel, Training, Internal Affairs and Text Paging.

LCSO also possesses a mobile PSAP capability contained within a semi-trailer. Call taker and dispatcher workstations, radio controllers and wired and wireless connectivity options permit the truck to operate as a stand-alone PSAP or to provide additional call handling and dispatch capacity in a surge. Currently this mobile PSAP is based on a Positron system but is planned to be replaced with CML/Plant solution similar to what is in use in both City and County main PSAPs.

3.7 Leon County CAD - EMS

System:	RescueNet Dispatching
Vendor:	Zoll Data Systems http://www.ZollData.com
Database:	SQL Server

OS:	MS Windows
Servers:	Dell PowerEdge 2600 (2) RescueNet Nomad/Paging ProQA
Key Interfaces:	9-1-1 ALI/ANI by CML/Plant Address Validation Nomad AVL/MDC server ProQA

Emergency Medical Services, while dispatched from the LCSO PSAP, utilizes an entirely separate COTS CAD system, RescueNet Dispatching, formerly called RightCAD, by Zoll Data Systems, a company that specializes in EMS solutions. The EMS technical environment exists in a separate Active Directory domain and is supported by LCSO IT personnel.

The two servers are clustered together and utilize their own storage. Other supporting functionality outside of CAD shares space on servers which also support LCSO CAD. AVL is fully implemented and integrated via the RescueNet Nomad product.

A COTS product, ProQA (EMD) from Priority Dispatch (http://www.prioritydispatch.net), provides guided questioning protocols to determine the likely cause and severity of the complaint to provide a more effective response. The AQUA module is used to conduct EMS dispatch review and quality assurance.

3.8 Leon County RMS - Sheriff

The RMS system utilized by the Sheriff's Office is also a custom application developed by Lawrence and Associates, the maker of the CAD application. It utilizes ISAM data files and the COBOL programming language. Like the TPD application this RMS is tightly integrated into the CAD as it was developed and maintained by the same vendor utilizing the same technical environment for both applications.

The RMS system also contains a case management module. This is supported by document management system from LaserFiche (http://www.laserfiche.com). Key fields within the RMS are indexed within the document management system to allow for easy access to images of relevant reports and other documents.

4.0 Network and Wireless Data Environment

The network environment, and in particular the wireless component of the network, is a critical component of any public safety system. While an in-depth analysis of the City and County networks was not within the scope of this study information was gathered to enable a basic understanding of the network environment and its implications for current and future public safety applications.

4.1 LAN/MAN

Both the City and the County maintain advanced networks. In the City, a fiber-based network already provides connectivity to all public safety facilities. A network enhancement project utilizing Enterasys equipment has recently been launched which will provide enhanced security and performance.

The Fire Department has three stations outside the City limits. These stations are connected to the network via T1 lines.

The County maintains a 1GB backbone network with 100MB provided to the desktop. Cisco is the standard for switches and other networking equipment on the network.

4.2 Wireless

The ability to support first responders in the field with advanced applications integrating graphics and even video is a significant force multiplier. However, these applications typically require access to substantial bandwidth. As a result, the MDCs in the public safety vehicles, while they provide considerable benefits to the first responders of the City and County, from a capacity standpoint are grossly underutilized.

The City's mobile data needs are currently met through the 800MHz network with a nominal speed of 19.2kps while the County utilizes a 450MHz platform with 9600 baud speed. Neither system has the bandwidth necessary to support advanced mobile applications.

To address this shortcoming, both City and County staff are assessing using air cards in the mobile devices to connect to commercial cellular data networks such as that provided by Cingular. This is an increasingly common approach in public safety agencies across the nation.

Additionally, WiFi access points have been installed in the TFD stations. Although not currently used, these access points can provide the ability to conduct updates to the mobile devices of large files such as those involved in downloading new maps or software upgrades. The County also maintains WiFi access points at each library facility as well as at the Cooperative Extension Service. If appropriately configured WiFi can be a highly secure and effective augmentation to the wireless environment.

TPD has purchased the RadioIP product which can integrate multiple wireless platforms in one secure, IP-based VPN. LCSO utilizes a similar product, MobileIP, manufactured by Cisco.

Overall, the ongoing enhancements and growth to the City and County networks and wireless environments will be well-positioned to support the future suite of advanced public safety applications.

5.0 Geographic Information Systems

A robust Geographical Information System (GIS) capability is a critical component of any public safety information technology environment. GIS systems not only provide crucial information to first responders en- route and on-scene but can also serve as the foundation for important management and analytical processes.

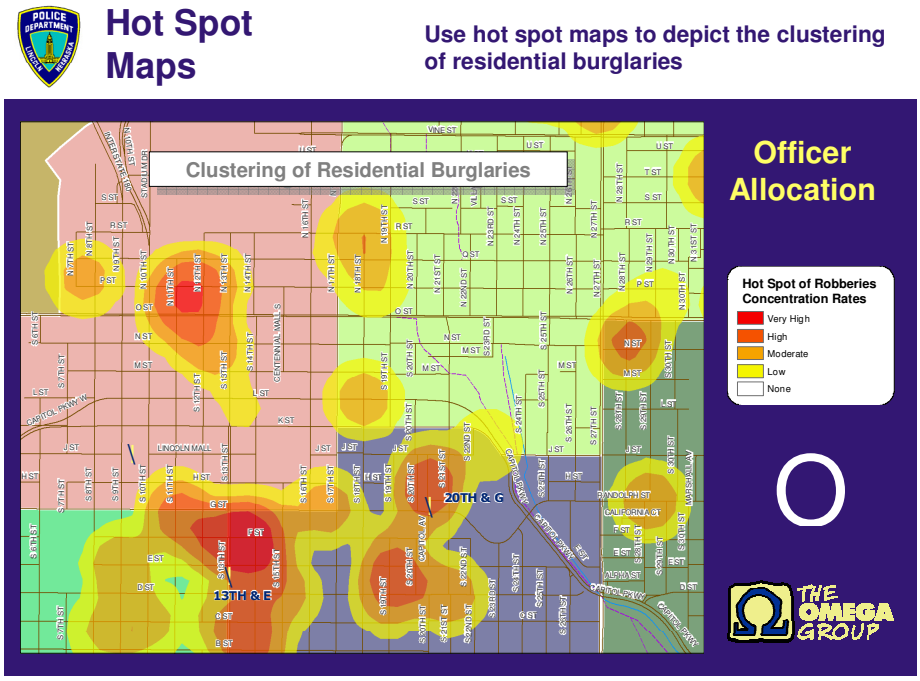


Figure 3. CrimeView example screen shot.

The City and County have invested significant resources to develop a coordinated in-house GIS operation. The Tallahassee-Leon County GIS (TLCGIS) was created in 1990 to centralize GIS data operations and data for the dual jurisdictions. TLCGIS provides a common base map to both PSAPs, indeed all users throughout the region, which reduces redundant collection of data and supports the ability of public safety personnel to meet their mission requirements.

TLCGIS uses the industry standard ESRI product suite and makes monthly updates to the base map. City and County public safety personnel make local changes to the maps for data that need to be immediately reflected, e.g., a new construction site that may be the scene of a 9-1-1 call but is not yet on the base map. These local changes are forwarded to the TLCGIS where they will be reflected on the next monthly update.

TPD is developing an Internet-based GIS application for the public to query crime stats. It is based on an Oracle database and ESRI products.

The TPD, FRD and EMS use electronic mapping extensively in their operations, the Sheriff's Office less so.

The GIS environment is well positioned to support any future environment

6.0 Environmental Scan Findings and Considerations

E9-1-1

Finding. Both PSAP E9-1-1 environments utilize substantially similar components including telephony interface, ANI/ALI database, recording and GIS/mapping to support call taking operations.

Considerations. The E9-1-1 equipment would be consolidated into a single system.

CAD and RMS

Finding. Three separate CAD and RMS platforms are in operation with no automated data exchange or interoperability present. LCSO is a unique, custom solution, EMS utilizes a COTS EMS-only product, and the City operates an all-encompassing COTS product.

Considerations. The only CAD in place that could handle all agencies is the one operated by the City. Scripts or interfaces would need to be developed to ensure that key LCSO and EMS interfaces to ancillary systems that need to be maintained, e.g., document imaging and ProQA, would continue to be supported. The consolidated CAD platform must meet current LCSO performance metrics.

LAN/MAN

Finding. Both the City and the County operate high bandwidth networks. The City recently launched a network enhancement project. Three fire stations outside the City limits connect to the City network via T1 lines.

Considerations. One network environment in the building would support all users. An integrated public safety virtual network crossing both City and County networks connecting all remote locations would deliver additional benefits.

Wireless (Data)

Finding. Different technologies and frequencies are currently used by the various agencies for their wireless data needs. Commercial “air cards” are being implemented by both the City and County. Both PSAPs are moving towards IP-based wireless networks with some level of intelligent roaming. The City is supported by a more robust wireless network management environment.

Considerations. An intelligent roaming capability could provide a unified wireless environment utilizing the differing technologies that exist. Management of the network would be significantly enhanced if all agencies selected the same commercial wireless provider for their data needs.

GIS

Finding. The existing GIS environment is well positioned to support any future environment.

Considerations. A shared public safety map would exist resulting in changes being made in only one place to support all agencies.

Power, Backup Power and Uninterruptible Power Systems (UPS)

Finding. Both PSAPs operate in facilities with a sufficient and reliable electrical power support. Both PSAPS maintain adequate UPS devices to cover temporary power outages as well as sufficient generator-provided backup power for more severe outages. In that the City's PSAP operates more equipment that backup power capability is more robust.

Considerations. Whether operating on a unified system or not the building itself would only require one generator-based backup power capability. The application servers and other devices would continue to utilize the current level of UPS protection.

Fire Station Alerting

Finding. The City CAD interfaces with the Zetron 25 Fire Station Alerting product which works reliably.

Considerations. There are none. This is a standard product that can continue to meet the needs of TFD regardless of future CAD environment or product.

AVL

Finding. EMS, Fire/Police and Sheriff each utilize AVL to varying degrees. As the SO continues to mature its use of AVL each agency will have implemented AVL technology.

Considerations. A uniform AVL environment would be easier to maintain and would provide considerable value to first responders and dispatchers leading to enhanced situational awareness and more efficient and effective responses.

Mobile Data Computer Systems (MDCs)

Finding. All agencies utilize in-vehicle MDCs. While different brands are in use, all are portable PCs with similar capabilities. The TPD MDCs deliver a broader range of applications.

Considerations. As the MDCs are standard laptop computers they will be able to remain in service regardless of the future CAD environment.

8.1.6 Facilities

LEON COUNTY SHERIFF'S PSAP
The Communications Center is housed in the Leon County Sheriff's Office located at 2625 Municipal Way. The three-story facility was designed and built in 1966 as the County Jail. In 1997 the facility was refurbished and now serves as the Leon County Sheriff's Office. It houses all administrative and support functions for the agency as well as the Communications Center, which is on the Second Floor.

The LCSO PSAP is an open workspace with connecting rooms. The "phone room" area has seven (7) call taking positions/terminals. The EMS area has two positions which possess both call taking and dispatching capabilities. Though the EMS positions can answer 9-1-1 calls, one position is primarily utilized for EMS dispatching, and the other is staffed by an EMS supervisor not employed by the Sheriff's Office. There is one (1) supervisor position in the "phone room". Five (5) of the phone room positions are multi-discipline CAD capable (law enforcement and EMS). The two EMS positions are Sheriff CAD capable but are utilized only for EMS dispatching.

Operations Support Offices/Areas
Adjacent to the Operations floor are following support offices/areas. There is a small office with space for two employees; the Quality Assurance Coordinator and the Training Coordinator, and a separate office for the Communications Center Manager. There is a small kitchen equipped with a sink, microwave oven, toaster oven, full size refrigerator, and a vending machine.
There is a small closet that houses 36 one square foot lockers for employee use, as well as a file cabinet and small paper shredder. This and another small closet are also used for general storage.

The LCSO maintains a training lab consisting of 8 student workstations, one instructor workstation and a network printer. The instructor workstation can be displayed on a ceiling mounted digital projector w/ amplified audio. The lab provides a "hands on" training environment for law enforcement and EMS CAD systems. Both CAD systems are duplicated in the IT test server environment which is provided for training needs as well as software version testing. There are other multi-purpose rooms available for training. There is also a computer with stand-alone CAD functionality that can be configured for Law Enforcement and EMS training located in the computer room along with the radio logging recorders. There is a gym with locker rooms for the facility that can be utilized by Communications Center staff. There is no break room, quiet room, dedicated meeting room, storage room.

LCSO PSAP Redundancy
The Leon County Sheriff's Office has two permanently installed (external) Ring Power diesel generators at the rear of the LCSO Administration Building. They each are equipped with a 500-gallon day tank supplying approximately forty (40) hours of run time, and are exercised weekly. Both units are Model SR4 providing 400 kilowatts at 480 VAC.

The generators start after utility power has failed for three (3) seconds, and transfers emergency power to the building via automatic transfer switches. One generator is designated for emergency power to the building's HVAC system and chillers. The second generator provides emergency power to mission critical areas of the building, including emergency lighting and critical power loads, 9-1-1 and Communications and the Sprint CO (CO is located onsite). The Sprint CO has separate climate control, redundant fiber connections, battery backup, and a manual transfer switch for an additional auxiliary generator hookup.

9-1-1- and Communications are supplied by two separate air conditioning systems that run independently of the building chillers. The 9-1-1 Room also has a Liebert Model DME027E - PH2 System for controlling humidity. Both generators were load-tested in July of 2006, and battery replacements were done in November, 2006.

All SO servers are housed in two separate 19" racks with separate uninterruptible power supplies. Each UPS can power the attached equipment for approximately 45 minutes in the event of power loss or emergency generator failure.

All 800 MHZ radio equipment (consoles, CEB, switches, ETC) is attached to a separate UPS that can power the attached equipment for approximately 45 minutes in the event of power loss or emergency generator failure. Each dispatch console is attached to a Back-UPS RS 1500VA + (1)BR24BP Battery Unit that can power the attached equipment for approximately 45 minutes in the event of power loss or emergency generator failure.

LCSO Mobile Command and Communications Center (MCCC)

The LCSO maintains a Mobile Command and Communications Center (MCCC) that was custom built directly to the design specifications as submitted by the Sheriff's Office. The MCCC contains a public information area, a command center, communications center and 9-1-1 facilities in one vehicle. It is totally self-contained, providing its own power, environmental controls and water systems thus allowing it to operate for extended periods of time in a remote area.

A complete communications center and 9-1-1 call center is provided. This center has the capability of performing all communications functions. It can be used to replace any communications facility that is inoperative or it can compliment any communications center by adding additional positions. The unit was designed as a regional response vehicle and is not limited to use within Leon County.

- There are five communications stations, two dedicated to 9-1-1 and call taking, two dedicated to radio operations and one that can be used as either depending upon the need.

- Each 9-1-1 position supports full mapping capability to indicate the location of the 9-1-1 landline caller.

- Each radio position is equipped with the countywide 800MHz system that supports most of our local emergency response agencies. Each radio position is also equipped with

preprogrammed VHF and UHF radios to support those agencies not on the local 800MHz system.

- There are two (2) portable 9-1-1 call taker positions which can be activated in the MCCC or any other location with accessible telephone lines.

- Landline telephone communication is provided through the use of a T1 connection. This provides for all telephone, 9-1-1 and data communications. This T1 can be activated from any source that dial tone can be obtained with minor reprogramming at the telephone company switch.

- In the event that normal landline telephone facility is not available, the system has the ability to automatically switch to a cellular system. This cellular system provides the same communications capability with data transfer at near DSL speeds.

CITY OF TALLAHASSEE

The TPD PSAP is located on the Second Floor of Police Headquarters located 234 East 7th Avenue. It is a 3 story building that was refurbished in 1975. It houses all administrative and support functions for the Police Department as well as the Communications Center, which is on the Second Floor.

The operations floor is an open workspace with functional disciplines organized around specific areas. There are 9 dispatch terminals; 4 for Police (one active for each of the three police districts and one Special Events channel [as needed]), 2 active Fire terminals with a 3rd channel available as needed, and 2 for Teletype (to run names and license plates) 1 of which is always staffed. Each of the Police and Fire dispatch terminals are multi-functional and can be utilized to dispatch for either discipline. There are 8 call taking positions that answer 9-1-1 and the non-emergency line. Teletype operations can be conducted from all call taker and dispatcher positions. The Shift Supervisor position is centered between the call takers and police dispatchers. Windows on one wall allow natural light to enter the operations floor.

Operations Support Offices/Areas

Connected to the Operations floor are following support offices/areas. There is a fully equipped kitchen with a television, two tables and a few chairs. Connected to the kitchen is a multi-gender bathroom. Offices for the Director and the GIS Section are connected to the operations floor and have windows to permit observation of operations activities. The equipment room is also directly connected to the operations floor with a sliding glass door.

The primary training classroom has 2 fully functional Computer Aided Dispatch (CAD) terminals. There is also a Police Department computer training lab that is equipped with 7 fully functional CAD terminals and two radio capable positions. The CAD terminals in both locations can be set up by a technician to take overflow calls if necessary.

There is a full size gym with male and female locker rooms for the facility that may be used by Communications Center employees. There are several storage rooms throughout the building.

The PSAP I.T. Section occupies a suite of three offices in the basement for CAD, RMS, and the B1 Suite Administrators. There are also offices for the MDC technician, application manager and in-car camera system. There are 54 one square foot lockers in the basement for the PSCOs

TPD PSAP Redundancy

The TPD Computer Operations Room was designed and specially wired for mission critical public safety servers (i.e., lightning protection, grounding protection, back-up power supply, etc.)

- AC power is routed through a Unisys Powerware 9330-40/30 UPS
- All servers in the COR and all CAD computers located in the Communications Center are protected by the Powerware 9330-40/30 UPS

A permanently installed (external) Ring Power diesel generator with an additional fuel tank supplies automatic emergency back-up power in the event of a power failure to the COR, Communications Center, CTF/EOC, and other mission critical areas

The generator is activated (back-up power starts) within two seconds or less of a power failure. The Ring Power generator completes a once a week test (start up and shut down) and the last load bearing test for the Ring Power generator was conducted in 2005. The Unisys Powerware 9330-40/30 UPS can supply power for approximately 58 minutes if the external Ring Power generator fails

Each server has a redundant (independent) Powerware 5125/9125 UPS which are located in three of the racks in the COR can provide a power source for approximately 24 minutes of runtime if the Powerware 9330 or generator fail. Additional generators to power the COR are available via:

TFD - Air1 (Mobile generator truck)
City Radio Communications Division 65 KW generator trailer
TPD has an emergency on-call contract with a local electrical company

The COR is cooled by two independent air conditioning systems that are connected to an alarm system. The temperature of the COR is monitored by a Sensaphone 6500 alarm system that contacts TPD personnel if there is a unacceptable change in temperature. Fire suppression for the COR is completed via an Inergen system. The COR is secured via an ADT alarm magnetic locking system.

8.1.8 Stakeholders Interviewed and Documents Reviewed

Stakeholders Interviewed by the Consultant Team		
Name	**Position**	**Agency/Office**
Abrams, Chad	Deputy Chief	Leon County EMS, Administration
Anderson, Dianne	Captain	TPD, Technical Services
Anderson, Steve	Deputy Chief	TPD
Bakotic, Scott	Major	LCSO
Beck, Scott	Officer	TPD

Brigmon, Wesley	Training Coordinator	LCSO
Campbell, Larry	Sheriff	LCSO
Connell, Kathy	Officer	TPD
Creamder, Jr., George	Officer	TPD
Curtis, Pat	MIS Director	Leon County
DeLoach, Don	Chief Information Systems Officer	City of Tallahassee, Information Systems Services
DePuy, Ed	County Commissioner	Board of County Commissioners
Dick, Cindy	Chief	TFD
Fair, Billy	Lieutenant	LCSO
Favors-Thompson, Anita	City Manager	City of Tallahassee
Ferrell, Doug	Information Services Manager	TPD
Frost, Greg	Executive Services Director	TPD
Gauding, Jeanine	Director	TPD, Technical Services, Communications
Gay, Rebecca	Communications Manager	LCSO
Gilkey, Arthur	911 Specialist	AK Associates
Griffin, Gene	I.T. Section Manager	Leon County
Hall, Tyler	Officer	TPD
Kemp, Mac	Deputy Chief	Leon County, EMS Operations
Lightsey, Debbie	City Commissioner	Office of the City Commissioners
Long, Cristina	Management and Budget Analyst	Leon County, Office of Management and Budget
Magruder, Leven	800 MHz System Manager	City of Tallahassee, Radio Communications Division
Maureau, Tom	Lieutenant	TPD, Communications Operations/Systems
McCabe, Joe	Human Resource Manager	LCSO
McNeil, Walter	Former Chief of Police	TPD
Morgan, Carl	Construction Manager	Leon County
Parwez, Alam	County Administrator	Leon County
Peck, Leroy	Officer	TPD
Pence, Patrick	TLCGIS	City/County
Proctor, John	Interim Chief	TPD, Support Services
Quillen, Tom	Chief	Leon County EMS
Rosenzweig, Alan	Assistant County Administrator	Leon County
Safford, Ronald	Aid to Commissioner, At Large	Leon County
Slade, Steve	Big Bend PBA President	TPD
Smith, Richard	Director, Emergency Management	LCSO
Spillman, Daniel	Captain	Leon County EMS, Special Operations
Summers, Chris	Lieutenant, Accreditation	TPD
Taylor, Edith	911 Systems Manager	LCSO
Westbrook, WS.	Officer	TPD
Wood, Michael	Major	LCSO
Yown, Michelle	Officer	TPD

List of Background Documents Reviewed by Consultant Team	
Document Description	**Date of Document**
Minutes of the August 25, 2006 PSCB Meeting	08/25/06
Minutes of the June 8, 2006 PSCB Meeting	06/08/06
Minutes of the June 27, 2006 PSCB Meeting	06/27/06
Minutes of the July 18, 2006 PSCB Meeting	07/18/06
Minutes of the September 8, 2006 PSCB Meeting	09/08/06
Public Safety Communications Board September 2006 Status Report	09/08/06
PSCB Memorandum of Agreement	12/13/06
Agenda, Public Safety Communications Board Meeting, December 7, 2006	12/07/06
The Tallahassee Advanced Transportation Management System (TATMS) Presentation	12/07/06
Emergency Management Campus Concept presentation to the Public Safety Communications Board by the Capital Area Chapter American Red Cross	12/07/06
800 MHz System Report, December 7, 2006	12/07/06
Dispatch Call Sequences for EMS Calls	12/07/06
Leon County 2006 Annual Report	12/07/06
September 2006 PSCB Status Report	09/08/06
January 2007 PSCB Status Report	01/16/07
Minutes of the October 27, 2006 PSCB Meeting	10/27/06
Minutes of the December 7, 2006 PSCB Meeting	12/07/06
TPD Chief Memo to County Commission	10/16/02
Powerpoint 5, TPD Workload Statistics	12/25/06
Fitch & Associates Powerpoint Briefing	05/01/03
TPD Memorandum 2003-553, Police and Fire Response to Emergency Medical Calls for Service	09/16/03
TFD Advanced Life Support, Emergency Medical Services Historical Data, PDF	06/25/05
USA Today, 6 Minutes to Live or Die	07/29/03
TPD Presentation, Joint Dispatch	05/01/05
TPD Presentation, Exploring Options, Joint Dispatch,	10/24/04
TPD Communications Center Diagrams	04/27/05
RCC Report to County Commission	03/22/05
TPD Response to RCC	04/14/05
TPD Analysis of RCC Consultants, Inc., Presentation to Leon Board of County Commissioners	04/19/05
TPD Dispatching QA Form	
TPD Fire QA Review Form	
TPD Memorandum, Benefits of Quality Assurance	06/01/04

TPD, Teletype QA Review Form	
TPD Call Taking 9-1-1 QA Review Form	
TPD Communications Center, SOP. Com 33-QA, Quality Assurance Supervisor	07/01/04
TPD Communications Center, General Order 54, Stress Management	11/05/01
TPD TRM PC Staffing Jan 07, EXCEL	01/01/07
LCSO Communications Center SOPs	Various
TPD Communications Center SOPs	Various
9-1-1 System SOPs	Various
800 MHz Communications System	Various
LCSO Job Description, Communications Lead Worker	
LCSO Job Description, Communications Supervisor	
LCSO Job Description, Communications Officer	
LCSO Job Description, EMD Quality Assurance Supervisor	
LCSO Job Description, Communications Manager	
LCSO Job Description, Communications Training Coordinator	
LCSO Salary Schedule	09/29/06
LCSO Communications Personnel Costs	
LCSO 2006 Benefits Summary	
EMS EEO Application Survey	
Leon County Board of County Commissioners Employment Application	
TPD Job Application	
TPD Salary Band	
TPD Training documents (electronic versions)	
LCSO Civilian Job Application(electronic version)	
LCSO Training Guide (electronic version)	
LCSO Communications Retention List	02/07/07

8.1.9 Supporting Documentation for all Service Level Documentation and Associated Metrics